

AMERICAN AGRICULTURIST.



Agriculture is the most healthful, the most useful, and the most noble employment of man.—WASHINGTON.

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NO. III.

A. B. ALLEN, Editor.

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TO AGRICULTURAL SOCIETIES.

It will be recollect that one of our correspondents in volume 4, page 376, proposed that we should offer the paper to Agricultural Societies, when distributed among its members, at the low rate of FIFTY CENTS a year per copy. With a view of aiding all such in the good work in which they are engaged, and to encourage the farmers to become members, the publishers immediately acceded to the proposition, and, in addition, have since offered the volumes handsomely and uniformly bound for SEVENTY-FIVE cents per copy. We hope that these very liberal deductions from regular prices, will be met with a corresponding spirit, and that they may not only be the means of increasing the number of members to these Societies, but ensure a preference among them for the American Agriculturist. The great benefit that would arise from the dissemination of such a work as this among the people must be apparent to all. Some Societies have not only taken a large number of copies already, but, in addition to this, have employed agents to go around among the farmers to form clubs and deliver lectures. This course has again been marked with success, and finds much favor when properly carried into effect. Would that we could see a hundred thousand copies of our periodical distributed among the rural population, and faithfully read, although we should not make a single cent by it. There would be a great reform then in many places, and an amount of good done for the farming community that could scarcely be calculated. We earnestly entreat attention to this subject among all interested in agriculture.

Since the commencement of the present volume, our paper has materially increased in its circulation, and we have no doubt that several thousand new subscribers will be added to the old list before the

close of the year. But we will not anticipate too much, knowing how hard it is to get the farmer and planter to support what is for their best interests. How important that their minds be open to conviction; yet we cannot expect to see this done till a general course of agricultural education is introduced into the district schools. This would make an effectual revolution.

Subscribers will please remit direct to the publishers, Saxton & Miles, 205 Broadway; and not to the editor, A. B. Allen, 187 Water Street. Enclose the money in preference to Post-office orders, as these are very troublesome to collect. The former may be done at the risk of the publishers.

EARLY PLOWING.

PERHAPS some of our readers may think that an article on plowing in the month of March is rather out of place. This depends entirely upon the climate and season. Sometimes we have a warm spell of weather in which plowing may be performed, even in the northern States; but plowing is always going on more or less during this month in the southern States. To those who cultivate clay lands, which they neglected to plow last autumn, we would say, take the first opportunity when the frost is out to plow such land, and be sure to plow it deep, and be careful to lead off all the surface water by running furrows in different directions before you begin to plow. Another caution, don't work either your men or your team in rainy weather, neither after a rain until the ground is sufficiently dried *not to make mortar* in the furrows by the tread of the team. The object of this timely plowing is, that the land may if possible have a chance at the frost before sowing or planting. The mechanical effect of the frost upon the land thus turned up and exposed, is to make a stiff

clay soil much more friable, and to put it in a better state to receive the seed, and with no other preparation than a slight harrowing, to prevent its falling too deep in some places between the furrows. We write from our own experience in fall and winter plowing, of a very tenacious and stiff clay soil.

PARSNIPS.

THIS month, in ordinary seasons, will permit in almost all regions of our country, the planting of the vegetables which endure the frost of spring. Among such are carrots and parsnips. These, of course, are to be found in every garden; and the carrot on nearly every farm as a field crop, where roots are grown for horses and cattle. As yet the parsnip has not been made a field crop to any extent, even in Europe, and not at all in this country. And still it is perhaps on all accounts the most valuable crop of roots that can be grown in any climate that will not permit the winter exposure of the turnip; and where the turnip will endure exposure, the parsnip does equally well, and is *quite* as productive, and in point of quality *far superior*. In the islands of Jersey and Guernsey they are cultivated extensively, and those who have most experience in their culture prefer them to turnips.

In all climates of the United States, north of Virginia, turnips, carrots, and potatoes, *must* be gathered and housed, or buried in winter; and when housed or buried, though with the utmost care, will in part decay; and if frosted, or over-heated, they are ruined. Hence it is that the farmer needs a crop that in any climate will endure the frost and exposure of winter. In the parsnip he has it. This root may be planted as soon as the frost is out of the ground in the spring; it will grow all the season, and until the ground freezes in the winter; nay, will grow during the thaws of winter; it will stand out through the winter and receive no harm, indeed be improved in its quality by the frost. It may be pulled at any time in the winter, and fed, and thus costs nothing to gather and store; and nothing is lost by decay, or frost, or heat. This cannot be said of the carrot, turnip, or potato. Here it is superior to them all; is it inferior in anything for a feeding crop? In nutritive properties it is equal in quantity, and as good in quality as the carrot, and superior in both to the turnip. In given weights, potatoes are superior to parsnips, carrots, or turnips; but of these there may be raised with the same trouble, expense, and manure, three times the quantity that can of potatoes. We have seen at the rate of 1,200 bushels of parsnips taken from an acre of ground. The same ground, under like culture, yielded only 300 bushels of potatoes.

We recommend a general introduction of parsnips as a field crop, as late winter and spring feeding for swine, horses, and cattle, and *especially for milch cows*. Let the ground be a mellow loam; plow well and deeply; *manure well* and abundantly with both fine rotted, and coarse unrotted manure; sow two pounds of seed to the acre; make the drills twenty inches apart; sow early, the earlier the better, say in March; cultivate well; stir the ground often, and keep all weeds down; have the roots about eight inches apart, and for this purpose commence to thin at the end of a month after they show above ground, and feed the milch cows

with the roots pulled; when sufficiently thin, keep them well hoed until the tops cover the ground well; after which a light plow run between the rows occasionally will only be necessary. Such is the process of culture; they require no more attention than turnips or carrots; no insect troubles them; if planted early they grow equally well in a hot or a cold summer, as they keep the earth moist; they will grow for nine months in the year, and *need no housing* or burying in winter. Can our readers tell us of a root so valuable; cattle and horses are fond of it, and we know that it is in every respect equal to carrots, and superior to turnips. It grows in all temperatures of summer, resists all temperatures of winter, and *all decay*, and thus obviates all the objection made to carrots and turnips, viz., the expense and trouble of gathering, storing, and loss from decay. Will our readers not try it?

Cows eat parsnips with avidity, and the milk is finely flavored, and the butter delicious. Beef made from them brings the highest price in the London market. All animals, horses, cows, hogs, and sheep, eat them more readily than carrots, and will not touch potatoes when parsnips are to be had. In Jersey and Guernsey they are used to fat pork as well as beef, and the pork is of the best kind.

There is a peculiarity in the parsnip to which we ask attention. It may be turned into a winter crop. It may be planted in August and September, and will get a good growth by winter. In the spring following it will start with the first thaws, and continue to grow well all the following season, and will not seed. By this means very large roots may be grown, and the crop increased in quantity.

Seed may be obtained at any seed store at about seventy-five cents per pound. We trust to hear of its extensive cultivation in the coming season.

THE STABLE.—No. 8.

OUR subject and illustration last month were biting and its management, and prevention; for this month they are the kindred ones of kicking and its prevention. Kicking is less common but more dangerous than biting; biting being rarely ever very serious; kicking, however, not unfrequently ending fatally. Horses that are habitual kickers, are more troublesome on account of the injuries inflicted on other horses than for those on their attendants. Some horses seem to have a mania for kicking; in the harness they kick their mates, in the stables all within reach, and when they cannot harm other horses, will kick at the stall partitions, or if those cannot be reached, will kick into the air. In such horses there will be found an excess of nervous energy, and they are expending it by this mode of exercise. Such horses are less vicious in pasture, for there they have full opportunity to exhaust themselves. In full work they moderate their propensity, and in excessive work lose it altogether. This species of kicker is beyond the reach of cure; the necessity of physical action to exhaust nervous energy is so great, that the fear of punishment is of no avail. He will break loose in his stable, at any hour, day or night, and kick his stall companions. Antipathies, he has none, for he will kick one and all alike. If such a horse is to be kept, he should be shut in a close box stall, and even then should be

fastened with a halter having a throat latch. This will make a double security. If the door be left open, the halter will detain him; if the halter be slipt or broken the close stall prevents escape. But with all this security he will do mischief, when not in hard work. It is poor economy to keep such a horse. He may be most valuable as a worker, but he may very easily ruin a horse just as good as himself, and he may ruin himself. His only place is in a large coaching establishment, where eternal work keeps him subdued in energy, till death ends both life and kicking.

A different kicker is he who does it from badness of temper; in him it is malice; he kicks to do injury and gratify his violence of disposition. This kind of kicker is the most dangerous of all. He cannot be guarded against; work does not subdue him, but seems to make him more violent. If groom and horse keep away from him, he will not often seek them; but he will suffer no opportunity to escape him to inflict a blow if they come within reach. He will have favorites, and them, whether groom or horse, he will not touch; he will have antipathies, and against those he hates he is ever vigilant and never spares them. In the stable he will kick as he goes to and from the stall, or as others pass him; in the pasture he will be kind to his favorites and savage to those he dislikes. Unless he fancies his groom, there is constant war between them; all the operations of the stable are of a nature to make him worse. Such a horse can only be managed by a groom that is a favorite with him, and he should have none but favorite companions both for the stall and the harness, about him. With these precautions he may be rendered measurably harmless, but is never safe. At times he will lose all his likings and kick grooms and companions. This will happen whenever he is hungry, and is not fed as soon as pleases him, or is sick or tired. This kind of kicker is sometimes without a single redeeming or manageable quality. He will have no favorite. He is then worse than useless. His destiny should be a coaching establishment, where, as a wheeler at hard work, he may soon wear out a dangerous existence.

Many horses are taught to kick; for this the horses should not be punished, but the groom. If they be not old, and be treated kindly and punished for the fault, and all arts to make them kick be discontinued, they will soon lose the habit. Most horses in training will kick; the constant use of the brush and curry-comb, with the teasing of idle boys, brings on the habit; yet after they are removed from the exciting causes, the vice ceases. This kind of kicking is never dangerous; the horse will rarely attempt to injure, he merely threatens; yet sometimes when much irritated will do mischief. The vice in him may be removed by the omission of all teasing, by kind treatment, and punishment when deserved. In all such cases hold the groom responsible, and the horse will be what he should. Some horses only kick at others, and never at persons; keep such separate and they are harmless.

Kicking horses are frequently so valuable that, like savage biters, they are to be kept at all hazards. Such are good stallions and brood mares. These, as they must be kept, must be guarded against. All others had better be placed where rapid work

will end life and vice together, that as short a period may be given as possible to endanger the lives of grooms and safe horses.

Our cut this month illustrates a method of managing a kicker. A rope is attached to the head-stall of the halter, and passes directly back to the post of the stall partition. When the groom is to enter the stall he pulls the horse's head by the rope back to the post, and then seizes him by the head. When he leaves the stall he carries the head back with him till he can safely escape. Another method is to have a small door in the partition at the head of the horse; through this the groom enters and comes out safely. When this can be done it is the best mode; and where it cannot be the rope should be used.



STALL FOR A KICKER.—FIG. 17.

In the management of kickers nothing but courage will answer. The horse discovers timidity very quickly, and is not slow to avail himself of the advantage it gives him to carry his point. The groom should be bold, and when he approaches the horse should give him warning; the whip or the loud voice will intimidate, and the horse should be placed on the one side of the stall when it is entered. Directly the horse sees there is no fear of him, and that he will be punished, he submits if he be not a ferocious one. Still he is to be watched; for if he be not, he will soon know it, and a blow will be the result. Many give warning; they flirt the tail and raise the leg; such are easily avoided; others give none, and strike very rapidly; others only when the groom leaves the stall, or when his back is turned. In all these cases the management is the same; constant watching, decision, threatening and punishment, if these will deter; and if not, then the reliance must be on the door by the head, or the rope. In all cases the groom should keep near his horse, so that the kick will be a push instead of a blow; and all kickers should be shod with flat shoes without caulk.

RULES FOR THE APPLICATION OF GUANO, ITS HISTORY AND VALUE.

Preparation.—Before using guano, pass it through a fine sieve, and all lumps remaining break up, and these pass through the sieve. Now take at least four times its bulk of sand, or dry sandy, or light loamy soil, and pass this through a coarser sieve, if you have one, and mix it in layers with the guano. Let this compost lie a few days—several weeks would be better—then toss it over and beat it up well together, and it will be fit for use. Some prefer mixing the guano with ten or twenty times its bulk of soil for a compost, and do not take the trouble of sifting it, but mix them together in alternate layers as well as it can be done with a shovel. Sifting, however, is best, as it is done so much more evenly. Sawdust is an excellent material with which to mix guano; but powdered charcoal is perhaps the best of all, as it fixes the ammonia, absorbs its unpleasant smell, and is in itself an excellent manure. When convenient to be obtained, plaster of Paris ought to be used in the compost, at the rate of 30 to 50 lbs., for every 100 lbs. of guano: it acts in the same way as charcoal. Lime and ashes must be avoided in composts, as they rapidly expel the ammonia, the most valuable part of the guano. Muck, if possible, should not be used for the compost, as it is too moist and tenacious to form a proper mixture. The same objection holds good against clay or any tenacious soil. Nevertheless, if there be no other soil at hand, muck or clay may be thoroughly dried and pulverized, and then used. Guano should not be mixed with barn-yard manures, or indeed with any moist substance, as these cause it to undergo the very decomposition requisite to promote vegetation. The compost should be made under cover, unless the weather be dry. Rain would be quite injurious to it, in hastening the decomposition of the guano, and expelling its ammonia in the atmosphere.

Value.—Guano is valuable for every kind of soil, except that which is already very rich, and to every kind of field and garden crop, grass, grain, vegetables, fruits, and flowers. The reason it is so serviceable to all, arises from the fact of its containing every kind of food necessary for the growth of stem, flower, fruit, and seed. The eminent chemist, Dr. Jackson, of Massachusetts, says: "It comes nearer to a UNIVERSAL COMPOST than any other excremental manure."

Guano is particularly valuable for conservatories and gardens, inasmuch as it is quickly and easily applied; its fertilizing matter is in a very condensed form; and it contains no seeds of weeds to shoot up and check the growth of plants desired to be cultivated. Its fertilizing properties being in a very condensed form, the whole cost of enough for an acre and its application, is frequently less than the cost of mere transportation of city or barnyard manures to the ground where they are to be used. This is a very important consideration to the farmer, and especially the gardener.

Quantity Required per Acre.—This depends upon the kind of soil and its condition, and the kind of crop to be grown. From 250 to 400 lbs. of guano per acre is the safest quantity to apply. It acts quickest in a light sandy soil or loam, and is ex-

cellent to start crops on cold, moist land. It hastens the ripening of crops on all kinds of soil.

Take Particular Notice.—In speaking below about applying a tablespoonful, or any other quantity of guano, we mean that amount, without admixture; if mixed with four times its quantity of soil, then it would require five tablespoonfuls of this compost to be applied to get the single one of guano, &c.

Grass and Grass Lands.—Spread broad-cast, from 250 to 400 lbs. per acre, mixed in a compost of earth of about four to one. As soon as the snow is off the ground and the frost begins to come out, is the best time to apply it. Another application of from 150 to 200 lbs. may be given in midsummer, directly after the first mowing. Care should be taken to do this just before a rain. Grass lands may be top-dressed in the fall; but in that case, much of the guano is likely to be washed off by the heavy rains and lost. We recommend applying it at the rate of 200 to 300 lbs. per acre, on land recently seeded with grass. This should be done just previous to harrowing and rolling.

When sward land is to be plowed for a crop, it may be top-dressed with guano previous to plowing, and then be turned under the sod. It will warm and hasten the decomposition of the soil, and afford food for the crop about the time the grain or fruit is filling, and thus add largely to the product.

Wheat, Rye, Barley, Oats, &c.—On winter wheat and rye, spread broad-cast from 200 to 300 lbs. of guano, per acre, just before the plant commences growing in the spring. If applied in the fall, unless on *very poor* soil, it is apt to give the crop too rank a growth before winter sets in. On spring wheat, rye, barley, oats, &c., spread the same quantity at the time of sowing, and harrow it in with the seed. If this be not convenient it may be applied within a week or fortnight after the grain appears above ground. Caution must be used about applying too much on the small grain crops, otherwise it will be likely to promote too rank a growth and occasion smut.

Indian Corn.—For this crop guano may be spread broad-cast upon the land, the same as for wheat; but it is better to apply it directly to the hill. Hollow out the hill with the hoe, put in about a tablespoonful of guano, cover it over one-and-a-half to two inches deep with soil, and then sow the seed and cover up. If the corn be sowed in drills, furrow out lightly with a one-horse plow, then apply the guano as in hills, and cover it with the hoe or other implement. At the first time hoeing, put double the above quantity of guano around the hill, and hoe it in, taking particular care that it does not touch the stalks, otherwise it will be very likely to kill them. If this can be done just before a rain, so much the better. Some apply guano again just as the corn is ready to tassel and fruit, but we should hardly think this necessary except in very poor soil. If more than the above quantity be applied to corn, it must be planted extra wide apart, otherwise the growth will be so large as to make the stalks and leaves intermix and produce smut.

Potatoes, Tomatoes, Sugar Cane, Tobacco, Cotton, Cabbage, Cauliflower, and some other crops, may be treated nearly in the same manner as corn.

Peas, Beans, Turnips, Beets, Carrots, Parsnips, and Onions.—If these are sown broad-cast, apply the guano in the same way as directed to wheat; if in drills, as directed with corn, except it might not be best to cover the guano with more than one to one-and-a-half inches of soil in the drill, and then sow the seed.

Asparagus and Celery.—It is a good top-dressing for these early in the spring.

Melons, Cucumbers, Squashes, and Pumpkins.—Treat to guano the same as corn in the hill, allowing an even tablespoonful for each plant to be left to run to vine.

Strawberries, Raspberries, Currants, Grape Vines, and indeed all fruits, may have guano dug in about the small roots, early in the spring.

Apple, Pear, Peach, Cherry, Plum, Quince, and other Fruit Trees.—Guano not only adds to the size, and fair, plump appearance of all fruits, but is said to increase the delicacy of their flavor. It should not be applied around the body of the tree unless it be a *very small* one, but to the extreme ends of the roots, otherwise it cannot be absorbed, and of course will be nearly all lost. Roots of trees spread under ground about the same distance from the trunk, as the branches do above ground. Let the soil be well trenched from one to three feet wide, according to the size of the tree, directly under the circle formed by the ends of the branches, and the guano then be incorporated with the soil, within a few inches of the top of the rootlets; it will thus find its way to their mouths, and as it decomposes be taken up in the sap for the benefit of the tree and its fruit. If applied later than May or June, it will make a large, soft, spongy, growth of unripened wood of no value whatever.

Steeps and Liquid for Watering Plants.—For one pound of guano use 5, 10, or even 20 gallons of water; or at the same rate for a smaller proportion. Stir it up well and cover over the vessel tight, so as to prevent the escape of the ammonia, and let it remain from one to three days before being used. Now water *around* (*not upon*) the plants as occasion may require. If this liquid touches the plant, or its leaves, it is apt to burn it. Previous to watering, stir the earth well around the plant. One pound of guano for 20 gallons of water may be thought to make a very *weak* steep for watering plants, but such is not the fact; we have seen the most surprising results from watering with a steep no stronger than this. Some of our friends last year steeped their corn and other grain in this liquid, from 3 to 24 hours previous to planting. It came up unusually quick, and grew very rapidly. For steeps we would recommend 10 to 20 gallons of water to each pound of guano, using the latter quantity for the more delicate seeds. It is so powerful a substance there is great danger of its killing the embryo of the seed, if applied in too strong doses. The phosphate of lime and magnesia in the guano are insoluble in water; the sediment therefore is valuable to spread on the land.

To the Ladies.—Guano is very easily applied by you, and in the neatest possible manner, to your conservatory and garden plants. Purchase a neat keg of it containing about 60 lbs., have a hole bored in the head, into which insert a stopper. Now place the keg on its side as if to draw liquor out of

it. Then as often as you wish to use the guano, take out the stopper and draw out what is necessary from the keg with an iron rod flattened and slightly crooked at the end. Now make a liquid of it as described above, or with a trowel dig a small quantity of it in the earth, around the plant. This, says Mr. Teschemacher, must be done before the plants form their full sized flowering buds, otherwise they will begin to make new shoots, the buds will be left behind, and the flowers will open with diminished beauty. Be very careful not to let the guano touch the stems or leaves of your plants, otherwise it will be certain to kill them.

A bouquet of flowers may be preserved a long time in water, by adding a very small quantity of guano to it as often as renewed. A quarter of an ounce to a quart of water would be sufficient. It might be well also to add a tablespoonful of pulverized charcoal at the same time.

Caution in Application.—Be very careful to place the guano so that it will not touch the embryo, or young roots, or stalks of corn, potatoes, cabbages, tobacco, sugar cane, cotton, or any plant that has but one stem from its root; for it is of such a burning nature, that if a portion no larger than a small pea comes in contact with the plant, before being watered or rained on, or undergoing partial decomposition, it instantly kills it. With grass and small grains this caution is not important, as other shoots from the roots will immediately supply the place of those killed.

Destructive to Insects.—That guano is destructive to insects may be proved by any one disposed to make the experiment. Take insects and put them in a saucer or bottle, and sprinkle a little guano on them; or mix up a tablespoonful of guano in a gill of water, and pour this liquid upon the insects. It will be found to kill the smaller ones almost instantaneously, and the larger in one or two hours' time.

History of Guano.—Guano, or huano, as it is called in the Peruvian language, is the dung of sea-birds which has been accumulating for centuries on the headlands and islands of the coast of Peru; the birds resorting to these places to lay, and hatch, and rear their young. A good many of the young die there, or are killed by being trodden under foot by the old birds. More or less feathers are annually shed from the old birds and incorporated with the dung, all adding to its value. These birds exist in countless numbers, and living almost entirely on fish, their manure is of the richest kind produced. It never rains on the coast of Peru; the fertilizing properties of the dung, therefore, are not subject to be washed out; and as very little of the salts can be evaporated in a dry atmosphere, it retains nearly all its fertilizing properties for ages. This dry climate is peculiar to the coast of Peru; guano coming from Chili or any other quarter of the globe, cannot therefore be so good as the Peruvian, as the analyses below fully show.

Guano has been used by the Peruvians from time immemorial, for manuring Indian corn and other crops and fruits. After the Spaniards conquered Peru, they adopted the use of it in their husbandry, and have continued it with the best effects for more than three centuries. In the West India Islands it has been used with good effect for a long time. It

was first introduced into England and other parts of Europe, to considerable extent, in 1840, and so popular has it become with the farmers of that country, that upwards of 156,000 tons were consumed of it the past year. It was first imported into the United States in 1824, but was little used till last year, when the season being very dry, rendered it peculiarly unfortunate for experiments. Guano must have moisture to derive benefit from it. The Peruvians always irrigate their lands after applying it. We should take care to apply it just before rain, or early in the spring, when the ground is wet, unless it is buried deep enough for the moisture of the ground to fully act upon it and ensure decomposition. This may be easily done in planting corn, potatoes, and some other crops, as directed above.

Best Kind of Guano.—The superiority of the genuine PERUVIAN Guano has led to various attempts in England, and latterly in the United States, to import and sell that of a very poor and sometimes almost worthless quality, under the name of *Peruvian*. Farmers should be careful to ascertain the origin of what they buy, to avoid imposition. The only genuine Peruvian Guano brought to this country is shipped by the Guano Company of Lima, under the authority of the Government of Peru. Every cargo thus shipped will come to New York, to the consignment of EDWIN BARTLETT, or to Baltimore, to SAM'L K. GEORGE. Every other offered as *Peruvian* is spurious and should be avoided. An inferior kind from Chili has been offered as *Peruvian*, an analysis of which will be found below, showing it to be of little value.

For further particulars of this important fertilizer, see Mr. Teschemacher's Essay, recently published in an octavo pamphlet of 50 pages, at Boston. It is the best work on the subject we have yet seen, and we are under considerable obligations to it in making up the above rules. See also American Agriculturist, vol. 3, pages 23, 98, 220, 222, 251, 334, \$48; and vol. 4, pages 36, 108, 156, 179, 236.

ANALYSES OF VARIOUS GUANOS BY DR. CHILTON, OF NEW YORK.

	Peruv.	Chilian.	African.
Phosphate of lime,	26.52	52.65	38.00
Ammoniacal salts	46.43	4.16	22.94
Oxalate of lime	5.44	—	—
Phosph. of magnesia and ammonia	2.00	—	—
Carbonate of lime	—	8.12	—
Chloride of sodium	.51	5.36	—
Sulphate of potassa	—	—	4.17
Sulphate of soda	—	4.41	—
Silica,	1.25	16.22	.58
Alumina, &c.,	—	—	—
Undetermined organic matter containing nitrogen	5.45	3.88	15.26
Water and loss	12.10	5.20	19.05
	100.00	100.00	100.00

ANALYSES OF VARIOUS GUANOS BY EMINENT CHEMISTS OF EUROPE.

	Peruvian.	Chilian.	African.
Ammoniacal salts, 33 to 40 pr. c.	12 pr. c.	23 to 28 pr. c.	—
Animal matter	5 to 7 "	3 "	5 to 9 "
Salts of potash and soda	8 to 12 "	8 "	9 to 11 "
Phosph. of lime,	—	—	—
Magnesia, and Oxalate of lime,	23 to 28 "	53 "	30 to 37 "
Water	10 to 13 "	22 "	18 to 25 "
Sand	—	2 "	—

ALPACAS.

At the January meeting of the American Agricultural Association, a committee was appointed to collect all the information to be had in regard to Alpacas, and to devise a way of introducing them into the United States. At the February meeting of the Association, the chairman, R. L. Pell, Esq., reported favorably to the project. He said, that the committee had given information through the public papers of their appointment, and had solicited subscriptions in aid of the enterprise. They put themselves in communication with Amory Edwards, Esq., an American merchant, residing in Peru, who chanced to be in New York. From him they obtained much valuable information. The Alpacas are to be bought in Peru for six dollars a piece. It is proposed by the committee to import three hundred. For this purpose it will be necessary to raise \$10,000. It will cost \$1,800 to purchase 300, and \$1,200 more to lay in the necessary feed for them during their voyage round Cape Horn, home. Of the sum of \$10,000, the committee had already on the 1st of February, \$8,000 subscribed. Of the \$10,000, it will be necessary to place in London, immediately, the sum of \$3,000, against which to draw for the purchase of the animals and their food. Bills on London are more valuable in Peru than money, and this is the best remittance. It will cost \$6,000 to \$7,000 for the freight of the vessel from Peru, home. The whole vessel must be taken up by the animals and their food. This, of course, is the great expense. The animals delivered here, if they arrive all alive, will cost about \$35 each, and more per head in proportion to the number that may be lost on the voyage. They are to be brought in a first class vessel, that they may be more secure, and insurance may be small.

Any person who wishes to participate in the importation may still do so. They will for this purpose address R. L. Pell, Esq., New York. When the animals arrive, they will be divided among the subscribers, in proportion to the amounts subscribed by each person. In case there should be subscribed more than \$10,000, there will be more animals imported, or the subscriptions will be rateably diminished to the aggregate of \$10,000.

Mr. Edwards, who sailed for Peru on the 5th of February, with the liberality that characterizes a patriot, has tendered his services *free of charge*, and, as he returns next summer to the United States, has agreed to accompany the Alpacas on their voyage here, and to give his personal attention to them. He states that they yield about 12 lbs. of wool per head, and that large quantities of their wool are exported from Peru to England; that it is worth in England about forty cents per pound; that the flesh of the animal is highly prized in its own country.

They live on the elevated plains of Peru, and on the sides of the mountains, and endure an elevation in the tropical regions of 12,000 feet. In the mountainous regions of Virginia, North Carolina, and Tennessee, they will feed themselves all the year, and flourish perfectly. In the north they will need the same care and protection that sheep do.

The high character and responsibility of the committee makes this a good opportunity to obtain Alpacas, and we advise all who wish them, to address Mr. Pell and forward their subscriptions.

AMERICAN AGRICULTURAL ASSOCIATION.

THE Annual Meeting of this Society for the election of Officers for the ensuing year, was held at the Historical Society's rooms, on the 2d of February, 1846. The chair was taken by Hon. Luther Bradish.

The minutes of the last meeting were read and approved.

Mr. Pell made the report of the Committee for the introduction of the Peruvian Alpaca into this country.

A letter from Mr. John Rhey, of Pittsburgh, Penn., addressed to A. B. Allen, upon the same subject, asking for information, &c., was read.

Mr. A. Edwards communicated some valuable information relating to the Alpaca.

The Society then proceeded to the election of officers. The following gentlemen were elected by ballot.

For President, Hon. Luther Bradish; *for Vice Presidents*, Hon. Theodore Frelinghuysen, James Lenox, James Boorman, A. H. Stevens, M.D., T. A. Emmet, H. Maxwell, S. Whitney, S. Knapp, Vice Chancellor McCoun, Cyrus Mason, D.D., W. A. Seeley, J. S. Livingston; *for Treasurer*, A. P. Halsey; *for Recording Secretary*, R. Ogden Doremus; *for Corresponding Secretary*, A. H. Green; *for Executive Committee*, R. L. Pell, J. W. Draper, M.D., Archibald Russell, Col. Edward

Clark, D. P. Gardner, M.D., R. K. Delafield, Shepard Knapp.

CHITTENDEN COUNTY, VERMONT, AG. SOCIETY.

—The Directors of this Society have just had their first meeting the present year, and have offered to the public a list of *three hundred and twenty-five* premiums, appropriating between \$700 and \$800 to various objects. We were the first, probably, to adopt the plan of giving an agricultural paper to every member of the Society who desired it; and we find this plan meets with universal favor. We employed an agent to go into every town in the County, and deliver two lectures on Agriculture, and take up subscriptions. Our number of members is more than doubled by this plan, and our prospects were never so encouraging. The whole mass of our community are deeply interested in the working out of this new experiment; and we anticipate from it the best results. We wish that other County Societies would try the same measure, and tell the world whether it is good or bad; whether the interests of the farmer are promoted by it or not. We wish to hear from other organizations on the subject, and hope they will open a correspondence with us, detailing their success. L. G. BINGHAM,

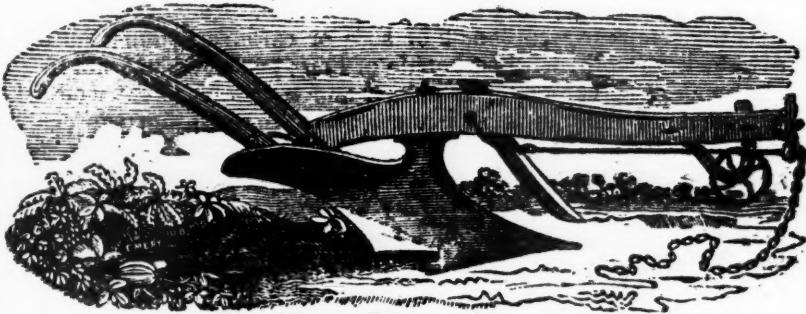
President C. C. Ag. Society.

Williston, Vt., Feb. 14, 1846.

THE EAGLE PLOW.

THE plow of which we give the annexed cut, is manufactured by Messrs. Ruggles, Nourse & Mason, of Worcester, Mass.; and the only place to find the genuine article in this city, is at our warehouse, No. 187 Water Street. We consider it the most perfect plow in the United States for general work. It will turn a furrow from 6 to 12 inches deep, and from 10 to 18 inches wide, according to the size used, and the requirements of the plowman. Four different sizes are already constructed, and others can be manufactured on the same principles if desired. The cutter can be raised and lowered at pleasure, or be taken out of the beam entirely: the same may be done with the wheel; but being generally fastened on the outside, this is unnecessary, as it can be raised so high as to admit the plow into the earth if wished, nearly up to the beam. Instead of a clevis, it has a draught-rod attached, to pull by, when preferred, thus making it a *perfect centre-draught plow*.

The latest improvement in the Eagle plow is a neat and simple dial apparatus (recently patented by Ruggles, Nourse & Mason) attached to the end of the beam, by which the plowman can easily and quickly place the end of the rod in a position that will cause the share to take any required width or depth of furrow. Considering the work it does, the plow moves with great ease. A single pair of horses or oxen, in ordinary soils, will take a cut from 6 to 7 inches deep, and 10 to 12 inches wide, with the No. 1 Eagle, and do the work in admirable style, laying the furrows *flat over or lapped*, as required, and according to the set of the wheel and cutter.



THE EAGLE PLOW.—FIG. 18.

Cheap, worthless imitations of this admirable plow have been recently got up in New York and elsewhere. We caution the public not to be imposed upon by them. To prevent this, their only safety is to address their orders directly to us, or to Ruggles, Nourse & Mason, at Boston, or Worcester, Massachusetts.

REDUCTION OF THE BRITISH TARIFF.—It will be seen by reference to our Foreign News, that Sir Robert Peel proposes very important reductions in the duties on agricultural products, admitting bacon, beef, hay, hides, meat, and pork, *free*; and others, such as buckwheat, Indian corn, and tallow, nominally free. This is to be followed by a gradual reduction of duties to the same scale, on wheat, flour, and some other things, which will open a very extensive market hereafter to American products, into Great Britain and Ireland. We hope that these concessions will be met with a corresponding spirit on the part of Congress, and that this *war of high tariffs* may hereafter cease. One nation may be so situated that it can produce certain articles cheaper and better than another nation; why then should it force other products by high tariffs, rather than make a beneficial exchange with its neighbors?

LIEBIG'S PATENT PROCESS OF MANUFACTURING MANURE.

It has been ascertained, that the growing of any crop on land in a state of cultivation, and the removing and consuming of such crop wholly from the land where it was grown, takes away mineral compounds; and it has been suggested by Professor Liebig, that in cultivating land and supplying manure thereto, the manure should be such as to restore to the land the matters and the quantities thereof, which the particular plants have abstracted from the soil during their growth. It has been observed in the chemical examination of marls and vegetable ashes, that the alkaline carbonates and the carbonate of lime can form compounds, the solubility of which depends on the quantity of carbonate of lime contained in the particular compound. It has further been found, that the said alkaline carbonates can form a like compound with phosphate of lime, in which the carbonate of potash or soda is partly changed into phosphate of potash or soda.

Now, the object of this invention is to prepare a manure in such a manner as to restore to the land the mineral elements taken away by the crop which has been grown on and removed from the land, and in such manner, that the character of the alkaline matters used may be changed, and the same rendered less soluble, so that the otherwise soluble alkaline parts of the manure may not be washed away from the other ingredients by the rain falling on the land, and thus separating the same therefrom. And it is the combining carbonate of soda or carbonate of potash, or both, with carbonate of lime, and also the combining carbonate of potash and soda with phosphate of lime, in such manner as to diminish the solubility of the alkaline salts to be used as ingredients for manure (suitable for restoring to land the mineral matters taken away by the crop, which may have been grown on and removed from the land to be manured), which constitutes the novelty of the invention.

I would here state, that although the manures made in carrying out this invention will have various matters combined with the alkaline carbonates, no claim of invention is made thereto separately, and such materials will be varied according to the matters which the land to be manured requires to have returned to it, in addition to the mineral substances above mentioned. The quantity of carbonate or phosphate of lime, used with carbonate of soda or potash, may be varied according to the degree of solubility desired to be obtained, depending on the locality where the manure is to be used, in order to render the preparation less soluble in localities where the average quantity of rain falling in the year is great; but, as in practice it would be difficult to prepare manures to suit each particular locality with exactness, I shall give such average preparations as will suit most soils as manure, and I will afterwards give such information as will enable parties desirous of applying the invention under the most disadvantageous circumstances to have manure manufactured for their particular cases. In making manure according to the invention, I cause carbonate of soda or of potash, or both, to be fused in a reverberatory furnace, such as is used in the manufacture of soda ash, with carbonate or phosphate of lime (and with such fused com-

pounds I mix other ingredients as hereafter mentioned), so as to produce manures; and such compositions, when cold, being ground into powder by edge-stones or other convenient machinery, the same is to be applied to land as manure. And in order to apply such manure with precision, the analysis and weight of the previous crop ought to be known with exactness, so as to return to the land the mineral elements in the weight and proportion in which they have been removed by the crop.

Two compounds are first prepared, one of which is the basis of all manures, which I shall describe as the first and second preparations.

The first preparation is formed by fusing together two or two-and-a-half parts of carbonate of lime, with one part of potash of commerce (containing, on an average, sixty carbonate of potash, two sulphate of potash, and ten chloride of potassium or common salt, in the hundred parts), or with one part of carbonate of soda and potash, mixed in equal parts.

The second preparation is formed by fusing together one part of phosphate of lime, one part of potash of commerce, and one part of soda ash.

Both preparations are ground to powder, other salts or ingredients in the state of powder are added to these preparations and mixed together, or those not of a volatile consistency may be added when the preparations are in a state of fusion, so that the manure may represent as nearly as possible the composition of the ashes of the preceding crop. This is assuming that the land is in a high state of cultivation; but if it be desired to grow a particular crop on land not in a high state of cultivation, then the manure would be applied in the first instance suitable for the coming crop, and then in subsequent cases, the manure prepared according to the invention would, as herein described, be applied to restore to the land what has been taken therefrom by the preceding crop.

Preparation of manure for land which has had a wheat crop grown on and removed therefrom.

Take of the first preparation six parts by weight, and of the second preparation one part, and mix with them two parts of gypsum, one part of calcined bones—silicate of potash (containing six parts of silica), and one part of phosphate of magnesia and ammonia.

And such manure is also applicable to be used after growing barley, oats, and plants of a similar character.

Preparation of manure for land which has had a crop of beans grown thereon and removed therefrom.

Take fourteen parts by weight, of the first preparation, two parts of the second preparation, and mix them with one part of common salt (chloride of sodium), a quantity of silicate of potash (containing two parts of silica), two parts of gypsum, and one part of phosphate of magnesia and ammonia.

And such manure is also applicable for land on which peas or other plants of a similar character have been grown and removed.

Preparation of manure for land on which turnips have been grown and removed therefrom.

Take twelve parts by weight, of the first preparation, one part of the second preparation, one part of gypsum, and one part of phosphate of magnesia and ammonia.

And such manure is also applicable for lands

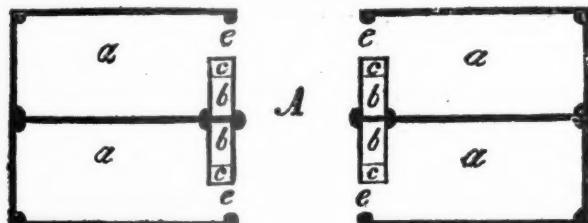
where potatoes or similar plants have been grown and removed.

I would remark, that I have selected the above cases, because they represent the chief of the products cultivated in this country; and in doing so, I have given such average preparations as will be beneficial in most, if not in all cases, as manure, to be used after the different crops mentioned; but manures may be prepared according to the invention, for other plants than those mentioned; and, if desired, manures may be made with greater exactness for those plants which have been mentioned for particular cases, if the matters of which the plants are composed and the quantities are first ascertained, by burning the plants and analyzing the ashes, and then combining the manure according to the analysis. The manure so made is to be applied to the land in quantities, as great or greater than the quantities of the elements which have been removed by the previous crop. It should be stated, that where the straw of wheat and other similar plants which require much silicate of potash, is returned to the land as manure, that is considered to be the best means of restoring the requisite silicate of potash to the land, in which case, in preparing the manures above mentioned, the silicate of potash would be omitted.

Having thus described the nature of the invention, and the method of proceeding under it, I would wish it to be understood, that what I claim, is the preparing and applying, in the manufacture of manure, carbonate of potash and carbonate of soda with carbonate and phosphate of lime, in such manner as to render the alkaline salts in manufactured manure less soluble, and therefore less liable to be washed away by rain before they are assimilated by the growing plants. JAMES MUSPRATT.

English Repertory.

A. SOUTHERN BARN.



GROUND PLAN.—FIG. 20.

A, passage way, 7 or 8 ft. wide; *a a a a*, stalls, 9 ft. long and 7½ ft. wide; *b b b b*, mangers for hay, 2 ft. long, 1½ ft. wide, and 1½ ft. deep; *c c c c*, boxes for grain, 1½ ft. long, 1 ft. wide, and 1 ft. deep; *e e e*, doors leading from the passage way into the stalls, 6 ft. high and 3½ ft. wide.

The horse's head is always at the door where his food is; he needs no halter, and can turn round in his stall, which gives him room to lie down at his ease. When you wish to feed, it can be done, without running the risk of being kicked, and the horse's head is where you want it to bridle him. The large passage will admit a cart or small wagon to pass through and receive the dung of the stable.

The partition walls should go down to the floor of the stall, whether of brick or stone. The door

should be open to admit light and air. About 6 inches from the floor there should be an air hole 3 or 4 inches wide, and above, under the plate, there should be an opening of about 4 to 6 inches, the width of the stall. The partition wall should not be less than about seven feet high, to keep the horses from biting each other—no opening allowed on the partition walls. On the posts in the passage there should be pins or hooks to hang up bridle, halter, &c. The above plan of stalls may be extended to any number, according to the length of the barn. It should be 25 or 26 ft. wide if double rows of stalls are wanted; and if only one row of stalls, then 16 ft. wide will do. Between the floors it should be 9 or 10 ft. The passage or outside door should be as wide as the passage, and have three or four hinges to each one, large and strong.

South Carolina.

JOHN B. MILLER.

FENCING.—No. 2.

In my last, I omitted to state one of the losses from fencing, which, though trifling to each individual, amounts to something in the aggregate. A mile of our worm-fence occupies half an acre of ground. If there are 100,000 miles of fencing in the State, then 50,000 acres of land are covered and made useless by fences. Supposing its average value to be \$5 per acre, here are \$250,000 more of capital lying idle.

In most parts of Europe there are no fences, and you may travel day after day, through beautiful fields, coming up to the road side. One feels as though he was riding through his own plantation. Here the section fences shut out much of the beauties of the growing crops and varied landscape, and frown defiance on every passer-by, eternally marking the fact that you are on another's soil, and a mere wayfarer. How much the pleasures of travelling and the interest in agriculture are diminished by this!

Then, again, we have here to keep up endless lanes—to close up our change roads, or put up gates, which are expensive, troublesome, and a constant source of vexation. Half the troubles of a planter's life are in some way connected with his fences. Besides the never ending labor, he has to clog, wound, and kill his neighbor's hogs, which are sure to find all the weak places; and he after all loses more or less of his crop every year. These trespasses, and the closing or changing of road, or leaving open gates, occasion nine-tenths of the heart-burnings and quarrels among neighbors. It is scarcely possible to maintain "peace and good will on earth," where rail-fences and stock ranges are the fashion.

I have said that after all our ranges are of little or no value. I believe that, in most instances, we feed as much to our hogs at any rate, as they would require in pens, and as much as the proper number of good cattle would consume. Let us suppose we feed only half as much now as we should feed without ranges, does any one doubt that if our stock was kept up all the year round, and their food doubled, they would give us double the meat; or, in other words, that with the same food half the number of stock would give us just as much meat as we get now? Our range system deprives us of all the benefit of improved breeds of all kinds.

Berkshire and Short-horns were not made for such grass as our woods afford, or cane and acorns. They are, when so treated, inferior to our native breed. Feed both breeds, however, and the improved ones are twice as valuable as the native. Now, hogs put up to fatten, will generally require about four bushels of corn each, when in the pen, and weigh perhaps 150 lbs. net. They have consumed at least as much, first and last, before penning. I doubt if we do not with all our range give at least ten bushels of corn for every 150 lbs. of pork killed in the State. Now, after some experiments, I will guarantee, that if a sow be fed with half a pint of corn daily, properly prepared in slop, for every pig she has, until it is weaned, and the pig be then allowed the same, gradually increasing the quantity until the ten bushels are gone, he will weigh at that time 300 lbs. Of course it must be done judiciously, and without waste. If the corn is ground into meal, or the corn and cob ground up fine together and boiled or fermented, it will go much farther. And all this can be done with as little trouble as feeding in the common way. A hand will attend to more hogs in pens than he can properly attend to in ranges.

By the proposition thus stated, the hog raiser will at least save himself by keeping up his hogs. If his neighbors would all do the same, they would save the expense of fences. But while the hog was consuming this ten bushels of corn, he would, if properly supplied with litter, make at least two hundred bushels of the very best quality of manure. One hand could supply litter, &c., for 100 hogs; or it might be done as our stables are (too commonly), filled only on rainy or idle days. The adoption of this system, however, accompanied with the certainty of making a large quantity of manure with little comparative feeding, would induce planters to make the manufacture of manure a regular business. A hog will not consume more than the eighth of what a horse will, and his manure will almost equal in quantity, and surpass in quality, that of a horse. Two hundred bushels of hog manure put on corn, say 50 bushels to each acre, will make a certain increase of 5 bushels per acre, first and last, if not more. We have then 20 bushels of corn returned to us, for 10 fed away. Of this, 10 bushels will more than cover the extra trouble of making and putting on the manure, and the other 10 will replace that consumed by the hog. We then actually get the hog for nothing, while our land is improved and our bacon also.

These calculations sufficiently verified, induce me to keep up my own stock for my own profit, though I live in a pine forest contiguous to swamps, and have ranges and timber fences in any quantity. If all would do so likewise, I cannot help thinking the greatest advantage would result to the State. If a law was passed requiring every man to keep up his stock on pain of forfeiting them, I believe it would be of more real service to agriculture, than any one law the legislature could pass. We should save \$1,000,000 annually; we should have an end put to half the quarrels, fights, and lawsuits, that take place; fine breeds of stock of all kinds would be introduced, appreciated, and taken care of; our lands would be improved, and our crops increased; and finally, we should all raise our own bacon—at

home and actually without cost—and all of these benefits would produce in turn, many more necessarily arising from them.

COKE.

South Carolina, Feb., 1846.

AGRICULTURAL CHEMISTRY AND GEOLOGY.—No. V.

Q. Upon what does the beneficial action of nitrate of soda upon plants depend?

A. Upon its supplying nitrogen and soda to the growing crops.

Q. What quantity would you lay upon an acre?

A. From 1 cwt. to 1½ cwt. to an acre.

Q. What is sulphate of soda?

A. Sulphate of soda is the substance commonly called glauber salts, and consists of sulphuric acid (*oil of vitriol*) and soda. It sometimes produces good effects when applied as a top-dressing to grass lands, to turnips, and to young potato plants.

40 lbs. of sulphuric acid with 31 lbs. of soda, form 71 lbs. of dry sulphate of soda.

Q. How is common salt applied?

A. Common salt may either be applied as a top-dressing, or it may be mixed with the farm-yard or other manure, or with the water used in slaking quick lime.

Q. In what places is salt most likely to be beneficial?

A. In places that are remote from the sea, or are sheltered by high hills from the winds that pass over the sea.

Q. How do you account for this?

A. Because the winds bring with them a portion of the sea spray, and sprinkle it over the soil to a distance of many miles from the sea-shore.

Q. What is gypsum? (plaster of Paris.)

A. Gypsum is a white substance, composed of sulphuric acid and lime; it forms an excellent top-dressing for red clover, and also for the pea and bean crop.

40 lbs. of sulphuric acid and 28 1-2 lbs. of lime form 68 1-2 lbs. of *burned* gypsum.

40 lbs. of acid, 28½ lbs. of lime, 18 lbs. of water, form 86½ lbs. of unburned gypsum. Native or unburned gypsum loses about 21 per cent. of water when heated to dull redness, becoming burned gypsum.

Q. What name is given to limestone by chemists?

A. It is called by chemists carbonate of lime.

Q. Are there not many varieties of limestone?

A. Yes,—some soft, such as chalk,—some hard, such as our common limestone,—some of a yellow color, like the magnesian limestones, which contain magnesia,—some pure white, like the statuary marble,—some black, like the Derbyshire black marble, and so on.

Here it would be advantageous if the teacher could exhibit some of these or of other varieties of limestone.

Q. What is marl?

A. Marl is the same thing as limestone, namely, carbonate of lime, only it is often in the state of a fine powder, and often also mixed with earthy matter.

Q. What is shell sand?

A. Shell sand or broken sea shells is also the same thing, almost exactly, as common limestone.

Q. Can these marls and shell sands be applied with advantage to the land?

A. Yes, either as a top-dressing to grass lands, and especially to sour, coarse, and mossy grass,—or they may be plowed or harrowed in upon arable fields,—and especially they may be applied with advantage and in large quantity to peaty soils.

Q. Can they not be used also in making composts?

A. Yes, mixed with earth and vegetable matter, or with animal matter, such as fish refuse, whale blubber, &c., and even with farm-yard dung, they will often produce very good effects.

Q. How would you ascertain the presence of lime in a soil, or in a substance supposed to be a marl?

A. By putting a little of it into a glass and pouring upon it either vinegar or weak spirit of salt (muriatic acid). If any bubbling up (effervescence) appeared, I should say that lime was present.

SHEEP ON THE PRAIRIES.—No. 3.

IN Vol. 4, page 55, I promised to give your readers another article upon the above subject. Miserable health has been my excuse for this long delay in doing so, and being now a close prisoner from the same cause, in my house, will be my reason for saying a few words more at this time.

In my last communication I had brought the flock into winter quarters. Whoever has had any experience in the matter, knows how difficult it is to bring them in, in good condition, from the prairie grass. It is a fact that never must be lost sight of, that luxuriant as the grass is in the summer, and good as is the hay made from it, the fall feed upon the prairie is as poor as poor need be. And it is this that produces death among the new flocks, more than every other cause. To prevent this the first year, commence feeding grain in small quantities by the middle of October, and continue it until snow comes; at which time the sheep will readily take hold of the hay, which they will not do while they can pick up a scant supply of frost-bitten herbage. Oats in the sheaf, I look upon as very good feed for sheep, particularly where you have no other convenience than the bare ground.

Mark R. Cockrill, of Tennessee, whom I look upon as one of the best shepherds in the country, says he prefers corn for his sheep, and he always feeds it upon the ground. He selects some clean dry spot of sward, and sows the corn broadcast, and then lets in the flock to pick it up. In feeding hay, he follows the same course; never laying down the hay while the sheep are in the same lot. By this means the sheep never run over each other to get at the feeder, or get crushed under the sled or wagon if the hay is hauled out, as it always should be (*a*). Mr. Cockrill never confines his sheep, to make them "stand up to the rack, fodder or no fodder," but gives them a broad range summer and winter. He has one of the best flocks that I know of, which consisted when I was there last spring, of 1,400 head of fine wool, and 600 head of long wool. He also has a cross between the Cotswold and Saxon, which are most beautiful animals. I have some interesting notes of his flock, which I hope to be able to write out some day.

One of the first objects with the shepherd upon the prairie, should be to get a good stock of domestic grass for fall feed. A good substitute may be found in rye sown very early—say in August certain. I believe that blue grass will be found to be the most permanent pasture that can be made for sheep, and that it may be worked in upon the prairie by fencing small lots and yarding sheep, which will soon kill the wild grass, and then by sowing the blue grass seed, it will take well without plowing. As I before remarked, the greatest difficulty in our soft, rich, black prairie soil, is the mud. Great care must be taken in yarding sheep, both summer and winter, not to confine them in too small a space, as I know of no animal that has a greater antipathy to lying down in the mud, than a sheep; and no treatment more likely to procure disease and death. If your yards, where you usually feed and keep the flock, get muddy, you must move them, or they will die. Don't say that you have nowhere else to put them. You *must* find a place if it is a mile from home, and you have to haul your hay and camp with them every night for a month. I have proved by experiment, that sheep will do better *without* water than *in* water. Last winter while I was at the South, one of my neighbors who had taken 225 of my sheep upon a contract to keep for the increase of the flock, giving me the wool, lost one-third of them, as I believe, solely from keeping them in too small a yard, where for weeks at a time the poor creatures never had a dry spot to lie down upon. And I have been told that at times they stood in mud knee deep. Of course I took from this brutal man the whole of the increase, having no more mercy upon him than he had upon the poor creatures that fell into his hands; and I feel as though I did not punish him sufficiently at that time. Now, I fear, there are hundreds of just such flock-masters, —ignorant, stupid, unfeeling, and indolent. They shelter themselves and families, in a rude uncomfortable log cabin, through the cracks of which the winds sweep almost as freely as they do through the rail fence that forms the only shelter for their cattle, unless they choose to be located near some friendly grove; which is the reason that I have advised the new settling shepherd to seek such a spot, where the comfort and health of his flock will be greatly promoted by giving them the privilege of a stroll through the bushes, of a sunny day in winter.

Many excellent locations can be found where it will be very inconvenient to find a washing place. But let not this objection be considered an insuperable one. It is not a very expensive or troublesome matter to make an artificial washing place. Select some little rill, and excavate a place big enough to put in a vat 4 feet deep, 8 feet wide, and 16 feet long; and if necessary add other vats of the same dimensions. It is a mistaken notion that it is necessary to have clear and swift running water to wash sheep in; for it is a fact, that until the water in the vat actually becomes thick with filth, it will loosen the dirt in the fleece better than clean water. Even when there is no kind of a stream to construct the washing place in, it could be supplied from a good pump in a shallow well. In many places where sheep are washed in streams and ponds, they accumulate so much mud and sand

upon the bank or on the road home, that the benefit of the washing is overbalanced.

"A penny saved is as good as a penny earned," is literally verified in shearing sheep. A good shearer will more than save his wages, over a slovenly one, besides the looks of the thing; for what work ill done, looks worse than an ill-sheared sheep? I say nothing as to the position of holding sheep while clipping them, for that is of little consequence, so that the fleece is kept whole, and rolled up in the most compact and neat manner, inside out, and tied tight with small strong twine. This is an important matter, and will well pay in the enhanced price of the clip, for extra wages to a careful hand.

If, as is often the case in newly settled places, you have no barn or other convenient building to work in, be sure and not commence your shearing until you have procured some large sheets of canvas—or coarse cotton drilling will answer—to lay down upon the ground to lay your wool upon to keep it out of the dirt.

Before sending to market, put up the wool in sacks, made of five yards each of stout tow linen, yard wide. Sort the fleeces, and fill each sack with those of equal quality as near as possible. If you sell the sacks with the wool, the buyer will always pay for them, and if he can ascertain the quality aright, without unpacking, will prefer to do so, and will be likely to pay about a cent a pound extra for your neatness and honesty.

A word more about filling the sacks, and I have done. Sew up in each bottom corner a bunch of wool as big as a goose's egg. Get a stout wooden hoop, made like a cooper's truss hoop, the size of your sacks, slip it over the top of the sack, and wind the cloth over round the hoop, and then have three ropes that will suspend the sack just clear of the ground, and at the end of these ropes iron hooks that will just clasp the hoop, which will keep the cloth from slipping off, and still be easy to cast loose. Let the packer get into the sack, and as the fleeces are handed to him, tread each one into its place, and you will be surprised to see what a quantity you can get in. When full sew up the mouth, and make two just such corners as at the bottom. These are the handles of the sack, and are very convenient.

Perhaps at some other time you may hear again from your "Old friend of the Prairies."

Dec. 10, 1845.

SOLON ROBINSON.

(a) Our readers will recollect Mr. Cockrill is located in a mild climate, where little snow falls. The corn of that climate is not as hearty and as oily as it is here. Oats, peas, and beans, are undoubtedly the best grain for northern store sheep.

THE YELLOWS IN PEACH TREES.

I AM under the impression that the disease called the Yellows, is generally supposed in this country to attack peach trees only, and to be peculiar to the United States, and that our writers have been contradictory, and far from satisfactory in explaining its causes; but that they have unanimously pronounced it incurable and contagious. From the following passage translated from the New Duhamel, vol. 6, p. 28, folio ed. 1815, it would seem that these opinions are incorrect

"The Yellows is a disease common to all trees; it shows itself by the yellow color taken by the leaves when they lose the beautiful green which belongs to each kind. Its effects are the unseasonable fall of the leaves; the drying up of the ends of the young branches; the scantiness and weakness of the wood; the smallness and almost abortiveness of the buds; the insipidity of the fruit; the general change of the sap; the languor and decline of the tree, and at last death, if timely care has not been taken to apply a cure. Its principal causes are a poor, worn-out, shallow soil, too dry and impenetrable to the rains; or a soil too cold or wet; or else one in which clay and subsoil are in contact with the roots. Its cause may also be found in cut worms, ants, and other insects, which take up their abode at the foot of trees. The cause being known, the remedy is easy, and that to be employed will be determined by the nature of things; thus, according to circumstances, it will be necessary to have recourse to manures, to waterings, and to trenching, in order to draw off the waters and cause them to flow, or to supply the roots with earth of a good quality. If the evil is caused by insects, it will be necessary to take measures for their destruction. If these proceedings have been seasonably adopted, and before the contagion shall have reached the roots, the trees will soon acquire their natural beauty and vigor."

My experience in the cultivation of this tree has by no means confirmed the views which American writers have taken of the Yellows. I am convinced that it is not a contagious disease, and that it should almost always be imputed to some quality or defect in the soil, which prevents the roots from imbibing the substance, which, when carried to the leaves, is there converted into the prussic acid with which the foliage of the peach tree is known to abound, and without which it cannot prosper.

PERSICUS.

SOUTHERN CROPS AND CULTURE.—No. 1

I KNOW it is impossible to persuade the planters of the cotton region especially, and I doubt not of your northern country also, that they have any interest equal to the present full crops. As I think there is, when I write, I give my convictions; I must therefore say what I think, which is, that a proper management of our land is of as much, if not more advantage in a general rule, than the making of large crops.

If a planter will exert himself to protect his land, he will gather for a life-time fair and remunerating crops; whereas, by the common careless mode of planting, he will make for five years good crops, the next five he will make ordinary, the next five still smaller, until within less than twenty or twenty-five years his crops will be so bad, that he is forced to extraordinary exertions in working his land, or to emigrate. Is this not so?

In much of our northern country, lime, marl, and manures are cheap; and conveyance is cheap. These things are demanded on account of the previous bad culture of the cultivators. Here, all these things are dear, but fortunately for us they are not needed—our soil being comparatively new, and where the surface soil is worn, the subsoil possessing all the requisites of a good soil. We have yet one more advantage, our winters are so much mild-

er and shorter we can grow grain cheaper; and the cow-pea will grow among our corn without material injury. I have repeatedly referred to these facts, but they are in my estimation of so much value and of so easy application, that I must continue to allude to them even if I repeat "line upon line, and precept upon precept." The policy is, to protect land from the sun, from washing, and from the exhausting effects of cropping. Whether this can be done, and good crops gathered for 50 or 100 years, I will not dare affirm; but this I will do—much of our lands lying near to the water courses, and the flat lands in the western part of Mississippi, can be kept near their present state of product for many years.

We never remove corn-stalks from our land, as is done in many portions of the United States; many have burnt them off, as they do cotton stalks—these are therefore generally returned to the land. If the pea be sown among corn about the 1st of June, the vine will cover the land entire before the hottest of our summer be past, and if not fed off, will give a vast quantity of vegetable matter to the earth; these, with the corn-stalk, will nearly counterbalance the deterioration caused by taking off the corn and the fodder—and if we were to sow down in October, Egyptian oats or rye, on corn and cotton land, to be left on the ground until planting time, I feel certain that the washing rains of winter would do but little injury, and that the return to the earth would be ample. There can be no doubt as to the vegetable matter, and I presume there is a sufficiency of inorganic matter in our soils to last many years without any material injury; for we only export the cotton wool, having, you may say, all the balance to return to the land. What the intrinsic value of cotton seed is, taking stable manure as a standard, I cannot say; but I am fully convinced they ought to be used only as manure. I am satisfied as to feeding hogs with them, having tried them effectually. The experience of all men can never induce me to use them again. I have lost in twelve months full 60 hogs, that should now have netted me 12,000 lbs. of pork, and which I could now sell for about \$500. I say not that my loss is entirely attributable to the seed; but I know that I lost some very choice mixed hogs, which were killed by the seed. As to feeding cattle with them, I am so doubtful, that I exclude my stock entirely. I would then only use them for manure. A brother planter of mine, who is devoted to planting, informs me that he has manured in the drill, and that the yield was about one-third gain, which, if only 300 lbs., would be \$4 or \$5 per acre; this for the first year; \$2 to 2.50 for the second year; and \$1 to 1.25 for the third, would be some 10 dollars per acre in three years. I would use enough to do permanent good, say about 100 bushels per acre, thus manuring about one-third of cotton land yearly, at a trifling cost. Thus far, the labor and cost is trivial, and all corn land and one-third of the cotton land has been manured. There should be enough rye, oats, and peas saved, to plant the succeeding crop. You have no conception of the quantity of grass that follows an oat or a rye crop, in this country, on fair land. I have no doubt but I could have cut a ton per acre, and then left a heavy aftermath to

turn under. I know some *theorists* deny this—but that matters not.

To the above I would recommend at least half an acre be planted per hand of sweet potatoes, one-third to one-half of an acre with artichokes. I know that ordinary land, producing say 8 to 10 hundred lbs. of cotton per acre, will produce 1,000 to 1,200 lbs. sweet potatoes. My experience with artichokes is too limited to speak positively; but when we reflect that the leaves are large and hairy, that the product is from 200 to 1,000 bushels per acre, and that no portion of the crop is fed off from the land, the improvement must be certain. The stalk and leaves contain more alkali than most any other plant yields, and very largely of ashes. I have understood that some writer has determined—for himself—that sweet potatoes exhaust the land very much; all I can say to this is, I have assisted in planting them for 25 to 30 years, and have made up my mind that a good crop of sweet potatoes, leaving the vines on the ground, is equal to a good manuring.

There is yet all the manure from lots, stable, and hog pen to use, which, though small, yet will add somewhat to the general result. This can be vastly increased by hauling in leaves and corn-stalks. In addition to the improvement from manures, I would urge as equally important—rotation. A friend who dined with me this day, who was bred to farming, and who is no theorist, made confession of his conversion to the soundness of the doctrine. He was incredulous, and changed this year mostly through necessity. He says, though he was injured by worms and a bad stand, that he has made a better crop than he ever had before. If we will examine into the material taken up by some crops from the earth, we can see that there is sound reason in the matter. Let us take wheat and oats. Wheat takes up 19 percent. of potash, and 20 $\frac{1}{2}$ of soda; whereas oats require only 6 of the one and 5 of the other. If wheat be persisted in for several years, these alkalies must become scarce on farm lands; whereas, if a crop that would probably take less or restore a portion were planted, and the land allowed to grow up in grass or weeds, there would be some certainty of making other good crops. I have seen an *improved* crop of cotton grown on land after it had grown one crop of oats, which were fed off to hogs on the land.

Draining is another important addition. Many are prepared to pounce on this—"what! drain our lands here when we need so much moisture!" The advantage of draining much of our upland would be sure, in getting a stand of corn or cotton earlier; of its growing off earlier; of its ripening earlier; and in course of its needing moisture in midsummer, much less. But if the land be drained, so as to draw off the water that the earth cannot absorb, it cannot prevent the earth from retaining as much moisture; and from being less liable to being impacted by water, will really retain moisture longer—besides, the early shading of the land will retain it. By getting corn up earlier, and it growing off earlier, it can be laid by earlier, and thus we shall have more time to attend to cotton.

We lose too much time in fencing, and if we would adopt hedging with the nondescript rose, or

the macrophylla, we could have time to labor much at other improvements. Just think of three-quarters of a mile of fencing per hand, and calculate the cost. Why, sir, the yearly cost would put in the ground a hedge, and one-tenth the expense would keep it up as long as we should live. Besides, timber is more scarce in some regions, and getting so in many others, which will cause an increase of expense.

I might say something of pasturage, of its saving of corn, of its ability to keep up stock, &c. But I am tired of writing, and I suppose my friends are of reading. I therefore close by subscribing myself,

Edwards Depôt, Miss. M. W. PHILIPS.

A DRILL CULTIVATOR AND MARKER.

I HAVE now at the Fair of the American Institute two implements, the one denominated a Drill Cultivator, and the other a Drill Marker and Vine Layer, of both which I believe myself to be the original inventor.

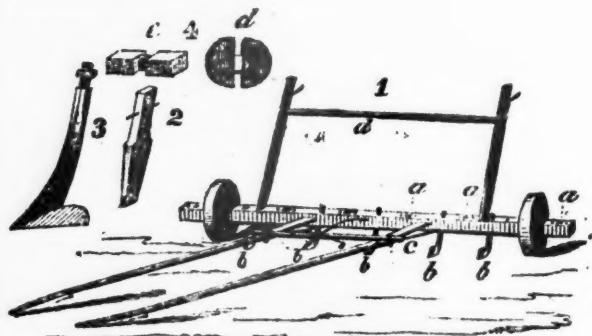
Having cultivated four acres of strawberry plants with these implements during the last two seasons, I will briefly describe the method of their use. In the first place, some slight inequalities in the surface of the ground were removed by a common road scraper for filling ruts. For marking the ground in drills I used the cultivator with the eight wooden teeth and the wheels. When sufficiently smooth and even, a line was extended on one side of the field, and a mark drawn by it for the outside tooth of the implement. It being then taken up, was stretched close on the ground, as a guide to the rider, where the horse should walk, to bring the outside tooth to follow the mark already drawn; and the process was continued, crossing the field back and forth until the whole was finished. The unexpected ease with which the implement was managed, surprised me, and I was not a little gratified to find that none of the many present could distinguish those marks in which a tooth had returned. The guiding is rather a nice matter, yet by no means difficult, much less impracticable, as had been predicted. It requires, however, a slow horse and a careful rider.

Another objection was, that the horse would injure the plants by treading on them; but the injury really sustained is found to be of little or no consequence. Strawberry vines, when trodden down, will rise again like grass. The implement is regulated by one of the handles only, usually the left. The holder, walking behind the wheel, grasps the pin of the handle with his right hand, which is brought to rest against the thigh, a little below the hip, and the upright part with his left. The reason for holding it thus will be understood, if it be considered that the shares will run at the depth the wheels will allow, and no deeper, without the least attention on the part of the holder, and that nothing remains for him to do but to prevent the implement from tending to the right or left. If the shares run too deep, an addition is made to the circumference of the wheels by sheet iron bands or otherwise.

In estimating the effort required to govern the machine, it should be recollected that the *slightest* force may change the direction of a moving body, such as would have no perceptible effect upon it in

a state of rest. In the position of the holder above described, the effort is not so much confined to the arms as otherwise it would be, and actually causes no more fatigue than ordinary plowing. This implement is evidently not adapted to uneven or stony land; and where these difficulties exist to such an extent as not to be easily remedied, it will be better to avoid them altogether, by adopting other modes of culture.

That *strawberry vines* are not materially injured by the feet of the horse I have proved by experiment; whether if the implement were used for turnips, beets, &c., this objection would be valid, I cannot say; but should venture to presume that the damage, if any, to single plants, here and there, would be much more than compensated by the saving of labor and other advantages. For these crops, it is suggested, that three harrow teeth, set at three inches apart, would be a very good substitute for one of the shares. With this alteration the wheels might be unnecessary.



DRILL CULTIVATOR.—FIG. 21.

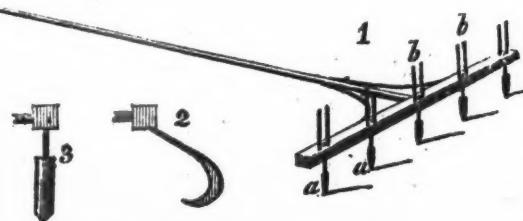
Description.—*b b b b b*, Shares to run between the drill. The wheels are about one foot in diameter. 1, *d*, A cross-bar, connecting the handle; 2, a wooden tooth, of which there are eight belonging to the implement, to be inserted at *a a*, &c., one foot apart, for marking out the ground. For this purpose, however, the marker mentioned below might be substituted. 3, The share or tooth formed like a coulter, and bottom piece without a mould board. It is laid with steel and made sharp. 4, The wheel *d*, in halves, and the manner of applying it to the axle *e*, by bolts and screws. To the under side of the axis is nailed a piece of sheet iron or tin to diminish the friction of the wheel. *c*, A brace fastened at one end by a nut to the bolt passing through one of the thills and cross-piece, and at the other to the axle.

The other implement, the Vine Layer, is almost indispensable for cultivating strawberry plants in drills. The plants are, at first, set in the drills, about two feet apart, in holes made for them by a sharpened stick. Should any fail to live, their places may be ascertained by the marking side of the implement, and again supplied at any time, although the original marks may have become obliterated.

When the vines have commenced running, and before the young plants have taken root, the vine layer is drawn lengthwise of the drills, each pair of pins including between them the several plants. The operation may be deferred so long as the surface of the ground is dry, for not a plant will strike

its roots; while the larger and heavier the young plants become, the more sure are they to remain where the implement leaves them. Repeat the operation throughout the season, as often as necessary, always drawing the implement in the *same direction*. If a few plants that have become a little rooted in the drills are torn out occasionally, it is of little importance, it being the general good of the whole that we have in view. Continue the use of this implement until the plants are as thick as possible in the drills, and about two inches in width. The plants will thus cover the ground beneath them, and almost entirely prevent the growth of weeds and grass. To confine the rows afterwards to the required width, *blades* are set in the implement in *place* of the pins, to cut off the runners as they grow. The shares of the cultivator will do this, but not so accurately. To avoid injuring the leaves of the plants in the drills, the blades are formed by flattening out the lower end of a pin similar to the others, making it a little *hooked*, and so setting it, that the vines will readily slip on the cutting part.

As a horticultural implement this may answer not only for laying out strawberry beds and turning their runners, but at the same time as a marker for all sorts of beds.



DRILL MARKER.—FIG. 22.

Description.—*a a*, Teeth or markers, set one foot apart. *b b*, Pairs of pins about 6 inches in length round and smooth, inserted on the opposite side to *a a*. These pins are two inches apart, and are set one foot apart, exactly opposite the markers on the other side. 2, Is a blade for cutting off superfluous runners. 3, One of the teeth or markers formed of wood, fastened to the head of the implement by an iron pin.

In this implement I make no claim to the invention of the markers, any further than their combination with the blades and pins; they are merely incidental, and the implement would be complete without them.

PHILETUS PHILLIPS.

Middletown Point, N. J., Oct., 1845.

METHOD OF FASTENING HORSES.

I OBSERVE in the January No. of your paper a sensible article upon the Stable, yet not in full accordance with my experience and opinion. You recommend tying the horse to the front of the stall, passing the rope through a ring with a weight on the end. Many horses cannot endure a pressure on the head, back of the ears, as is observed in a case of what is called *fis* or *blind staggers*, when produced by having the check rein buckled tight, and the horse warmed by a sharp drive, the veins become enlarged, and the pressure of the headstall upon the vein, back of the ears, retards the circulation, and the horse is in great distress, when by removing the check rein and headstall, relief is im-

mediate—consequently the vein should be left free, or with no extra pressure.

My plan is to have a ring in the back of the manger, about as high as the horse naturally holds his mouth, giving length for him to reach for food in all parts of the manger or box, and when lying down the head cannot touch the ground or bottom. The horse rarely stretches himself out and places his head flat, except when a hot sun is practising mesmerism upon him. The danger to be avoided is permitting the horse to stretch himself out in the stall, and to endeavor to roll. This he usually will after a drive, when warm, as his skin itches, and he rolls to allay the pricking. If the halter is long the chances are he gets cast, and, if in a bad position, the owner has the satisfaction the next day of helping him out of the stable, never to return. By tying to the front of the manger you cannot give length sufficient to enable the horse to reach food in all parts of the manger, without incurring the risk of his putting his head on the ground and attempting to roll. By tying to the back of, and across the manger, there is no risk of the horse getting his foot over the halter, a common accident when tied in the old way.

S Y.

Oyster Bay, Queens Co., Jan., 1846.

We deem our correspondent's plan quite objectionable. If the halter be long enough to permit the horse to lie down, he may as well be tied to the front of the manger. If he be tied *short* to the back of the manger he cannot lie down at ease; his head must be quite elevated. When he lies down, no pressure will be brought on to the poll, but all on to the *jowl*. But pressure on the *poll* does not impede circulation; on the throat it does. If the halter be loose and the horse be tied short, pressure may, and most likely will, be made on the jugular vein, and the difficulty apprehended by our correspondent may occur. Now with a weight, when the horse is standing, no pressure is exerted, as the weight rests on the bottom of the manger. When he backs or lies down with his head on the floor, the weight is raised. A very light weight will keep the halter straight, and from under the horse's feet; and if light, the horse can lay his head down, and the head's *mere weight* will be enough to hold the weight suspended, and no muscular force need be exerted for that purpose. Our correspondent's plan prevents the horse from being halter cast, but it does not permit him to lie at ease. Our plan does both—and the weight only is held up by the head when the head is flat on the floor. Our experience is too long to permit us to doubt the goodness of our plan.

Horses will constantly, day and night, in sunny and in cloudy weather, lie flat down with the head on the ground or floor—give them a chance and they will do it whenever they lie down. With a tired horse, it is absolutely necessary that he should have full rest, to recover soon. If he can lie flat down, he can rest more perfectly. The weight should be so arranged that the halter rope is always straight, and should never press on the head except when the horse backs in the stall or lies flat down. This at once prevents all chance of the horse being halter cast; and yet permits perfect rest.

FARM AND VILLA OF MR. DONALDSON.

WITHIN the past ten years, there has been quite a revolution in the Northern States with respect to country life; it is now rapidly assuming here the rank it has so long held in Great Britain, and in some parts of the Continent. In England, especially where the love of rural pleasures pervades all classes, the most affluent and noble of the land seem to consider their town houses as merely temporary accommodations during the whirl of the fashionable season, and the sitting of Parliament, after which they fondly return to their ancestral castles, where for many generations all that wealth, taste, and skill could contribute, have been accumulating to make their homes desirable. The opulent merchant, too, as soon as the hour on 'Change permits, seeks his cherished suburban villa; and even the toiling mechanic and pent-up tradesman look forward with impatience to the period when they shall escape from the din, dust, and vexation of the city, to enjoy the pure air, fresh verdure, and blooming shrubbery of a cottage. Too much of the wealth of this great and growing Republic is lavished in the finery of town houses; and how often do we see gentlemen, after securing ample fortunes, still pursue, amidst the turmoil and heat of the city, the dull routine of business, as mechanically as if on a treadmill; with countenances seamed with care—often prematurely sinking into haggard dyspeptics, when they have within reach the ever varying and refining pursuits of the country, where their health may be renovated, after the wear and tear of city life, and their children receive that best inheritance, the *mens sana in corpore sano*—health of body with health of mind.

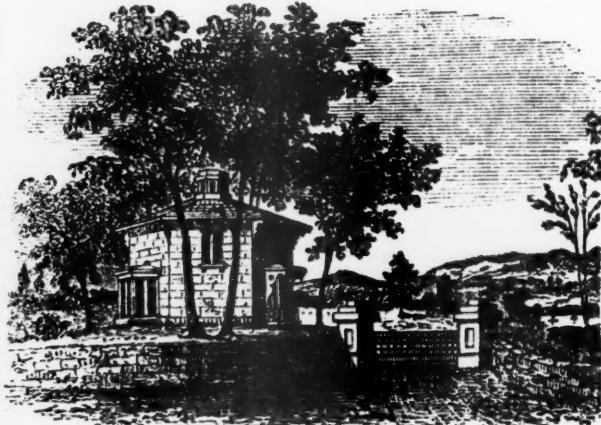
We hail with pleasure the evidence of an improving taste in country life in America; but above all, bringing the various sciences of chemistry, geology, botany, animal physiology, &c., to the aid of the farmer, and making them his efficient handmaids. Even sublime astronomy has at length become subservient to agriculture. The celebrated philosopher Arago, was enabled to predict in Europe the severe winter of '44 and '45 in time to prepare against its rigor. How much expense and suffering would have been obviated, could the wide reaching drought of last summer have been foretold! With these explanatory suggestions, our readers will perceive why we occasionally visit and describe highly improved places. We anticipate much good to agriculture from gentlemen of wealth and leisure; indeed, they are its most liberal patrons. We cite one evidence of this. A few persons in this city have recently contributed nearly \$10,000 for the importation of Alpacas from South America; and we hope soon to see a subscription on foot, for establishing an agricultural college where farmers' sons may be properly educated for their profession, and be taught to follow it through life with the same pride and pleasure as did the good and great Washington, who emphatically pronounced it "the most healthful, the most useful, and the most noble employment of man."

Blithewood, the residence of Robert Donaldson, Esq., is situated in Dutchess County, on the Hudson river, about a hundred miles above this city. It was formerly the seat of General Armstrong, of

Revolutionary memory, who was Secretary of War under Mr. Madison. Though the author of several useful works on practical Agriculture and Gardening, Gen. Armstrong will perhaps be better known hereafter by his celebrated Newburgh Letters, addressed to the Army of the Revolution, when about to be disbanded by Gen. Washington. An interesting relic of the early days of our Republic was recently brought to light at Blithewood, by the removal of a partition wall. We annex an engraving.



FIG. 23.
letter of one of the glorious old Thirteen States of the Revolution.



GATE-LODGE.—FIG. 24.



GARDENER'S HOUSE.—FIG. 25.

To visit Blithewood, we landed at Barrytown, two miles below, and in approaching it, the gate-house or lodge (fig. 24) was the first object that attracted our attention. It is a hexagonal brick building, stuccoed and colored in imitation of free-stone; and strikingly placed on a terrace in the

midst of a group of forest trees, it is no less ornamental than useful. An excellent macadamized road leads through the estate from the lodge to the mansion.

Soon after entering the gate, we lose sight of all boundary walls and fences, and pass the gardener's house (fig. 25). This is in the Cottage Gothic style, and with its pointed and projecting gables, and miniature porch, covered with honeysuckles and Boussault roses, it has a very neat and pretty appearance.

Approaching the house, the road winds among white pines, through which may be seen the graceful slopes of the grounds, and the noble masses of wood. The view which is disclosed, as you sweep round to the river front, assures you that nature has been lavish of her beauties here. Our readers will get a very good idea of the view presented at this point by looking at the frontispiece to Downing's *Landscape Gardening and Rural Architecture*.

The Kaatskill mountains, on the opposite side of the river, reach a height of nearly 4,000 feet, and the range may be seen for fifty miles, clothed in the enchanting hues that distance ever lends to bold mountain scenery. The unusual width of the river here—the wooded isles—the promontories, with their quiet bays—the spires of the neighboring villages—the Mountain House—all combine to form a landscape of extraordinary attraction. The scenery along the Sawkill, which forms the southern boundary of this place, reminds one of Trenton Falls. The stream descends in cascades and rapids, 150 feet in a quarter of a mile. A lake has been formed about half way up its course, through the estate, the placid waters of which contrast finely with the rushing cataracts.

By an overshot water wheel which could be made ornamental, and a simple hydraulic machine, a portion of the water of this stream might be forced up to the adjoining height, and thence conducted to the house, garden, stables, and cattle yard; it might also be made to irrigate the grass land, and to form fish ponds, and *jets d'eau*.

The dwelling house is 160 feet above the river. It is a low, but most commodious structure, embosomed in trees, stuccoed and colored in imitation of freestone, with a deep verandah on three sides, and a boldly projecting and richly bracketted roof; and whatever may have been its original plan, it has been so enlarged and transformed by its present owner, as to present a most inviting aspect. The interior is very tastefully arranged; but on this we cannot enlarge, and confine ourselves to a description of the picture room—an apartment on the river side of the house, 16 by 32 feet, of a high pitch, and receiving its strongest light through an ornamented sash in the ceiling. In this choice, though limited collection, there are the Picnic Party in Epping Forest, by C. R. Leslie; a Landscape, by John Both; the Billet Doux, by Terburg; the Lute Lesson, by Gaspar Nether; a most lovely Madonna and Child, supposed to be by Luini; the Physician and Invalid, by the elder Palamedes; the Benevolent Family, a

highly finished painting, by a Flemish Master; together with some portraits by Leslie, and some carefully made copies of well known pictures. But more striking than all these is the *Landscape Window*, a novelty introduced by Mr D., which quite took us by surprise. It is an oval plate glass, 3 by 4½ feet, inserted in the wall, and surrounded by rich mouldings, in imitation of a picture frame. One feels that the natural beauties here revealed surpass even the glowing composition.

Walks lead away in the most alluring manner, for two miles, through the varying scenes of this place, along which rustic seats and pavilions are placed, at the best points of view. We give a view of one of them on the Sawkill (fig. 26).

The spring house, which is in course of erection, on the verge of the spacious lawn, will be very ornamental. The water flows through a water lily, into a sculptured shell, from the scolloped lip of which it falls as from a dripping tazza.

The garden, which is in the geometric style, though near the house, is concealed by hedges and shrubbery. The upper plateau is devoted to fruits and flowers, and the terraces are given up to vegetables. The green-house and fruit houses, 90 feet long, are so arranged as to present a very handsome architectural appearance. Besides a great variety of foreign grapes, the fig, apricot, nectarine, plum,



RAVINE WALK—FIG. 26.

and peach, are grown in these houses as espaliers, and dwarf standards.

The Farm.—This comprises 125 acres. The soil varies from a sandy to a clayey loam. Parts of the outer lots, where the subsoil was so adhesive as to retain the surface soil, have been subdrained with the small stones gathered from the surface. These lots can now be worked at the earliest opening of spring; and though forming a very su-

perior soil for grass ; they yet yield very heavy crops of small grain. As an evidence of this, although the season of '45 was very unfavorable to oats, we here saw a lot which turned out 50 bushels to the acre. Since acquiring possession of this place, ten years since, Mr. D. has doubled the crops; and though he has occasionally used alluvial mud (*limed*) from the Sawkill, as a topdressing, and also plaster and ashes, and applied guano and poudrette to the hoed crops, with satisfactory results ; yet his main reliance for keeping up the fertility of his place, has been the barnyard. To this place all weeds, fallen leaves, butts of cornstalks, and offal of the farm, are gathered, and through these the wash of the barnyard leaches. We think Mr. D. has gone through unnecessary trouble and expense in plowing in manure on the slopes and banks to get them into grass, instead of pasturing South-down sheep, which might easily be done in hurdles. The growth of the sheep would in a single season defray the expense of the arrangement, and the sod would be left by them, topdressed and fertilized in the simplest and most efficient manner. We have often seen flocks of sheep pastured for this purpose on the lawns of the finest estates in England.

The farm-buildings are judiciously placed near the centre of the land, and well constructed for sheltering the cattle and saving the manure. The boundary walls are well laid, and the expense and unsightliness of cross-fences have been greatly avoided by soiling most of the cattle.

In stock Mr. D. has confined his attention to rearing a herd of milch cows, having with considerable care and expense selected the best milkers among the native cows that he could purchase, which, with one or two Ayrshires, he has crossed with his imported bull, Prince Albert, a noble Durham selected for him with much judgment, by his brother, Mr. James Donaldson of this city, when in England in '41. Among the cows there is a most extraordinary animal, called Kaatskill, from her native mountains. She shows a dash of Holderness blood in her veins, though she is supposed to be a native. We conversed with her former owner, Mr. Hendricks of Red Hook, who assured us, that this cow had, while in his possession, given 38 quarts of milk per day, on grass-feed alone ; and had made 18 1-2 lbs. butter in one week. On two of the days the butter weighed 6 1-2 lbs., and had not a spell of unusually hot weather ensued, which prevented her from feeding well, she would doubtless have made 22 lbs. of butter in a single week. This cow received the first prize of the New York State Ag. Society, at their annual show of 1844, as the best dairy cow exhibited.

We could say much more of Blithewood ; but should any of our readers chance to visit it, they will feel how inadequate words are to convey an idea of its varied scenes, some of which are worthy the pencil of Ruysdael or Claude.

Stucco.—We thought the Stucco used by Mr. D. in his buildings of a superior kind, and copied his recipe for making it. Take pure beach sand, and add as much Thomaston lime as it will take up, then sufficient hydraulic cement to make it set, say about one-fifth of the whole mixture of sand and lime. To prevent the cement attracting moisture, put a strip of sheet lead or zinc as wide as the

foundation of the building over it, then lay up the walls. The walls should be *hollow*, as they are stronger than solid walls, and they save nearly one-third of the brick. The finishing plaster can then be laid on inside without the expense of furrowing out and lathing, as hollow walls are always dry. The stucco is also more lasting and not likely to peel. The stucco can be painted a handsome fawn color by dissolving burnt ochre in *sweet* milk.

We saw here a most useful labor-saving machine, first introduced at Mr. William B. Astor's villa, for cleaning gravel walks. With this, a man, a boy, and a horse, may do the work of twenty men. We here annex an engraving of it. It is very simple in its construction, and costs about \$10.



MACHINE FOR CLEANING GRAVEL WALKS.—FIG. 27.

Mr. Downing has kindly permitted us to make casts of the illustrations above, from the cuts executed for his "Landscape Gardening and Rural Architecture," a work which we cannot too highly and too often recommend to the public.

SCRAPS FROM MY NOTE BOOK.—No. 2.

The Cherokee Rose Hedge.—South of Natchez, for miles, I rode between continuous lines of hedges of the "Cherokee, or nondescript rose," then, March 1st, in full bloom, of pure white fragrant flowers, single, with bright yellow centres, and rich bright green foliage, that gave the whole a most lovely appearance ; but the beauty of the scene was greatly marred by the fact that blossoms and foliage could not disguise that the whole was in a most slovenly state of keeping ; for the long straggling runners have grown up some ten feet high, and bend over upon each side, till the fence is often 25 or 30 feet wide, and owing to the hardness and sharpness of the briars, is as impenetrable as a stone wall for all kinds of stock, negroes included.

Dr. Phillips and Mr. Afleck, who were my travelling companions, assured me that a good fence could be made in four years from the cuttings of this plant, and that by proper attention every year, it can be kept within reasonable bounds. I did not, however, see an instance where it was. I saw many places where the runners had climbed up some convenient tree at least thirty feet.

To get a fence started is a very easy matter, as it is only to take those long runners and cut them up with a hatchet on a block, into slips about a foot long, and lay these in a furrow, with one end out,

and tread the earth down tight; it will be a rare thing if they fail to grow. Though, whether from failure to grow, or from being killed by frost, or something else, I observed in all these hedges, the same unsightly gaps that mark nearly all the live fences in the United States. These frequent gaps in the hedge are filled up with one, two, three, or perhaps a dozen pannels of rail fence, and in the joining together of the live and dead fence, holes are very apt to be left, through which that animal which *strange man* permits to run at large, to the eternal torment of himself and neighbors, will be very likely to insinuate his porkship about "roasting ear time."

"But why don't they fill up these gaps with new sets, if it is so easily done?"

Exactly the question that I will answer after the most approved Yankee fashion, by asking why we are not civilized, Christianized, rationalized enough to enact laws, or rather to repeal all laws, all over the Union, that compel one man to fence against every other man's cattle, some of which nothing but a Cherokee rose hedge would stop, and even that must be free from gates, bars, or gaps? And again, "if this hedge can be kept from spreading so as not to occupy four acres of land in every mile of length, and it makes such a beautiful as well as efficient fence, why is it not more extensively used?

Exactly the other question that I will answer after the same approved fashion, by inquiring why you—"what me?"—Oh, yes—you are the very man I mean—I want to inquire if you love peaches, apples, grapes, and other fruit? "Why, certainly."

Well, the hedge is not planted just for the same reason that you have never planted fruit trees and vines.

"And how far north will this rose flourish?" I cannot say; but I believe that it would be dangerous to rely upon it north of latitude 33°. Major Green, of Madison County, latitude 32½°, told me that he had 60 or 70 yards of Cherokee rose hedge growing very thriftily around his yard, in the winter of 1831-2, and nearly the whole of it froze to death. In the spring he cut it all off, and but here and there a sprout came up. His house stands on a high piece of ground—the soil, reddish yellow clay—timber, mostly black oak, rather scrubby. Whether this has any influence, or whether this plant will answer for fences further north, I cannot say; but I do say to those living further south, it is well worth your attention, and you ought to try it forthwith. And as your paper, Mr. Editor, circulates so extensively at the South, if some of your southern correspondents would give you an article every month upon this subject, it would not be too much of a good thing. It is also worth the trial whether the "Michigan Rose" will answer a good purpose at the North for hedging.

Here, upon the prairies of the North West, where it is supposed there is no timber, fencing material is altogether too plenty and cheap to think of using hedges yet awhile. But as we contrive to burn up what rails we have once a year, we shall soon come to the necessity perhaps. SOLON ROBINSON.

We regret to say that Mr. R. continues so ill that he will be obliged to give up his tour South this season, but we hope to see him there next winter.

PEACH AND NECTARINE TREES ON PLUM STOCK.

In England and some other parts of Europe, where the atmosphere is surcharged with moisture, and the power of the sun's rays is so feeble that it causes but a moderate development of growth, and but an imperfect maturity of the wood on trees of great vigor, it has been found advantageous to curtail or diminish the expansion of the peach, nectarine, and apricot, by grafting them on the plum, which is a tree of less sap and of much slower growth. The result of this practice is, that as the plum furnishes so much less sap to support the development of wood, the growth is retarded, and the expansion of the tree greatly diminished. This practice has also been applied to the pear by grafting on the quince, the hawthorn, and the mountain-ash; and to the apple by grafting on the paradise dwarf stock, and on other species similar in character. The effect of this cause is precisely like unto limiting the development of an animal of gigantic race by an allowance of only that quantum of blood which nature allows to a dwarf or diminutive one; and the final result is as might be expected, not only the curtailment of dimensions, but the shortening of the natural period of existence. All the trees, therefore, to which this dwarfing process is applied produce their fruit the sooner, as they sooner attain an unnatural maturity. They are also much smaller and shorter lived than such as are propagated in the natural way, and grafted on stocks of a similar and congenial character.

W.M. R. PRINCE.

Prince's Lin. Gard. and Nurseries, Flushing.

STUMP MACHINE.—This machine consists of a circular square or oblong cap, supported by three legs, and has a hole through its centre perpendicularly, sufficiently large to admit a screw of suitable size. The length of the screw depends upon the distance the weight is to be raised, or the object to which the machine is applied. The nut rests upon the top of the cap, where iron or steel washers should be placed, to prevent too much friction. The nut is turned by a lever being attached to it, the length of which will depend upon the purpose to which the machine is applied. A horse will raise forty tons when attached to a lever twelve feet long, and lead himself around the machine by a pole from the sweep near the nut, reaching just forward of the horse, and the machine can be moved from place to place by one or two men. The convenience of the improvement consists in the application of the lever and screw in the manner, and to the purposes mentioned.

ANALYSIS OF MARL ON THE HUDSON. —We have often spoken of the immense beds of marl lying on the Hudson river above the Highlands. The following is an analysis of a specimen made by Mr. Jas. J. Mapes, for Frederick F. Betts, Esq., of Newburgh.	
Carbonate of lime,.....	63.34
Woody fibre, moss, and decomposed veg. matter, 7.92	
Sand and earthy matter highly colored with iron and magnesia,.....	16.66
Iron, alumina, &c.,.....	5.
Water,	5.42
Loss,	1.66

Parts 100.

EXPERIMENTS WITH CORN.

I PROMISED last summer to furnish you the results of some experiments in which I was then engaged with different manures on corn. The excessive drouth of the season undoubtedly affected the results materially. Yet, as we have small reason to suppose the past to be the last dry season, they may be as valuable as though the economic result had been more favorable. It is not any single result, but the average of many that must be our guide. The experiments were all conducted under my own eye, and with all possible care and exactness. The ground covered by the different manures, varied from one-tenth to three-fourths of an acre, and was of an uncommonly uniform character. The different manures were applied side by side, in strips through the whole length of the field. I have reduced the whole to

acreable results, in bushels of 56 lbs.; the grain was shelled in January. The loss in weight on the sample measures, from the last of October, when husked, to the first of January, when it was shelled, was 22 1-2 per cent., on the gross weight, being in accordance with the results of previous experiments. I should state that experiment No. 1 (covering 3-20 of an acre) included the outside row on the north side.

Field No. 1, soil a free loam, in places gravelly; subsoil sand and gravel. In 1841, in corn; 5 cords half-rotted stable manure plowed under; seeded to grass in spring of 1842 on winter grain. Top-dressed with 25 bushels ashes per acre; again in '44, with 3 cords of compost. Average yield of hay 1 ton per acre. April, 1845, sod inverted 8 to 10 inches deep; rolled and harrowed. May 12th, planted with white flint corn, 4 by 3 feet apart.

No. 1. 1 acre, no manure..... 25 50-56 bushels.

TOP-DRESSED AT FIRST HOEING.

" 2. 1 "	5 bush. soot, 2 1-2 do. plaster.	Cost \$1.25.	Gain 43 lbs.	26 37-56	"
" 3. 1 "	15 " unleached ashes.	" 2.00.	" 49 "	26 43-56	"
" 4. 1 "	15 " hen manure, a 12 1-2 cts. per bush.	" 2.00.	" 332 "	31 46-56	"
" 5. 1 "	15 " Poudrette (Minor's), a 50 cts. per bush.	" 7.50.	" 353 "	32 11-56	"
" 6. 1 "	200 lbs. Peruvian Guano, a 2 3-4 cts. per lb.	" 5.50.	" 363 "	32 21-56	"
The hen manure was scraped up from the floor (of earth) of the hen-house from time to time, and contained considerable sand, &c.	 4 3-12		"	

Same field adjoining the above on south side, sod inverted, rolled, harrowed, and 8 cords of half-rotted stable manure harrowed in, planted as before.

No. 7. 1 acre. Stable manure alone.....	42 10-56 bushels.
" 8. 1 " " " and 15 bush. unleached ashes.	Cost \$2.00. Gain 80 lbs. 43 34-56 "
" 9. 1 " " " 15 " hen manure.	" 2.00. " 373 " 48 37-56 "
" 10. 1 " " " 20 " Poudrette.	" 7.50. " 494 " 50 46-56 "
" 11. 1 " " " 220 lbs. Guano (Peruvian).	" 8.50. " 534 " 51 30-54 "

Your readers can draw their own inferences as to the economy of the different applications. The stable manure costs, spread in the field, \$3.00 per cord. The concentrated manures are charged, likewise, at their cost in the field. L.

Rahway, New Jersey, January, 12, 1846.

STINGLESS BEES.

I LATELY noticed among the exports of Campeachy, wax, the produce of wild stingless bees; this reminded me of a notice I had once seen of a hive of stingless bees sent to Dr. Mitchell. The following is the notice alluded to, being an extract of a letter published in the New York Evening Post in 1830, from Henry Perrine, Esq., U. S. Consul, dated San Juan, Baptista de Tabasco, Mexico, July 20th, 1830, to Samuel E. Mitchell.

"I send you by Capt. Powers, of the schooner Washington, a hive of stingless bees, which you may dispose of as you think proper." Dr. Mitchell then says: "The bees have arrived in a lively condition, and though they were received only yesterday (Sept. 1st), are now making their excursions to and from their habitation with great vivacity. Their dwelling place is a hollow log, part of a natural excavated tree, in which these little creatures delight to live. The little swarm, after having been released from its imprisonment, came forth, and the members visited the flowers of the contiguous garden. It was observed as a proof of their economy, that after being immured during the voyage, the notable insects came forth loaded with the remains of their deceased associates, or with some excrementitious or foul matter. They thus

seemed intent on clearing their house. A hole in the side of the log, about three-quarters of an inch in diameter, answers the purpose of the entrance as a common hive. They are not so large as the common honey bee; but they have a neat aspect for an insect. As they are such harmless little creatures, it would please me very much to get a swarm of them. But I fear the number is so reduced, that it will require an apiary-man of more skill than I possess, to take the best care and make the most of them. I wish such a person would present himself, and take the colony under his protection. Something novel and curious at any rate—perhaps something useful might arise from it? An entomological description is desirable, but this must be postponed, on account of its nicety and difficulty, until a future day."

If Mr. Mitchell made an entomological examination of this interesting little insect, I never had the good fortune of seeing it published; indeed, since the publication of the above, I have not seen the little Colony in any way noticed. Dr. Mitchell died in September, 1831, and I should think it almost certain that he left an entomological description of the insect. The probability is that this little colony, by being so much reduced, or by the severity of our climate, did not survive through the ensuing winter.

Will not some of our enterprising ship-owners in the Mexican trade, cause to be sent to this country a few hives of these stingless bees, as there is much more attention paid and interest felt for bees in the United States now, than was in 1830? I have no doubt they can be placed under the care of

competent apiarians that would watch their habits and wants; and if our climate should at first prove too severe for them, they should be placed in a green-house to winter, where they would be an interesting and harmless appendage to any gentleman's collection of green-house plants. Their introduction would be only second in interest to the introduction of the Alpaca, which I am glad to see you so much engaged about. HENRY WATSON.

East Windsor, Jan., 1846.

GROWING WOOL.

THE growing of wool is one of the most interesting, pleasant, and profitable employments. Our resources and natural advantages for wool-growing are not surpassed, if equalled, by those of any other nation. With us, as a nation, the business is yet in its infancy, as well as the manufacturing of the article. The quantity raised is annually increasing, and expensive establishments are continually springing up in various sections of the land; and it is reasonable to suppose that the time is not far distant when the skill, enterprise, and perseverance of our people, will enable them to compete with the world in the manufacturing, as well as growing, of this important staple. Our wool and woollen goods will ere long find their way into the various markets of the world, as our cotton and cotton goods have at the present time.

The sale of wool depends much upon the manner in which it is prepared for market. It should be thoroughly washed, and no dirt of any kind tied up in the fleece.

For washing I prefer a clear stream, with a gravelly bottom, it being free from either sand or mud. Each sheep should be thoroughly soaked in the water, and then suffered to return to the land; then they should be thrown in again and the washing completed. I have never known this practice to injure the sheep, and the washers are more apt to get the wool clean than when they are thrown into the water but once. After washing they should not be driven on a dusty road, while the wool is wet. They should be kept in a clean pasture until shearing, which should take place in from four to eight days after the washing. If they run beyond this length of time, the wool will get dirty, and the prospects of making a good sale are thereby lessened. The fleeces should be tied up in a compact, regular form, and packed away in as neat and orderly a manner as possible. The wool should be kept in the dark, as its exposure to the light will in a few days give it a yellow color. G.

Salem, Jan. 20, 1846.

BUCKWHEAT CAKES.—You gave a method of making with soda and acid. These are not in every farm house. Here is my method. If you wish to have them made in five minutes, take some saleratus or pearl ash; dissolve it and put it into the batter, when mixed; stir well, and then pour in some vinegar; effervescence will at once commence, and directly the batter will be light, and may be baked. The cakes will not be as good as if raised with yeast, but will be good. When the batter has been put to rise with yeast, and does not, put in some saleratus or pearl ash and vinegar, and soon the cakes will be light. T.

CASTRATION OF CALVES.

I was for a long time troubled about having calves altered. My family have bred cattle for sixty years, and yet always employed a man to castrate all the males that were made steers. I submitted to this inconvenience myself for a long time. At length I was forced by chance into the performance of the operation myself. I soon found there was no mystery about it.

A calf that is to be altered, should undergo the operation as early as possible after being dropped. Throw him down and let one person hold him; he need not be tied. Have a sharp knife—a pen-knife is the best. Press the testicle down into the bag. Cut through the skin on the back or front side, to the testicle; pull the testicle out of its sheath and draw it out, until the cord which attaches it to the body is some way out of the body. At about two inches above the testicle in the calf, the cord is quite small, and enlarges as it goes up. Cut the cord at the small part; it will at once draw back into the sheath. Do the same to the other testicle, and let the calf go.

If it be a bull that is to be altered, the best way with him is to put him in a narrow stall and tie his head fast and close to the manger; put a rope round his neck and pass it down, and make a noose about each hind leg between the forelegs, and draw his hind legs well under him, and fasten the knots. So fixed he cannot move. His testicles will hang down, back of his legs. Take the knife and make an incision on the front or back of the testicles; cut through to the testicle; draw it out until the small part of the cord appears; cut off the cord at the small part. This done to both testicles, the operation is over. *Put nothing in the wound.*

Let it be done in good weather, or if bad weather, house the animal and there is no danger, and in a few days he will be well. In general the things put into the wound cause all the trouble. It is cruel to cord them, and frequently they are lost by it. Rams may and should be altered in the same way. Never cord them for mere humanity. A. S.

New York, Feb., 1846

ANNUAL MEETING OF ONEIDA COUNTY AGRICULTURAL SOCIETY.

THE Annual Meeting of the Oneida County Agricultural Society was held at Trenton, on the 8th of January, and considering the day, which was stormy, was fully attended. The following gentlemen were elected officers of the Society for the ensuing year.

For President, Dolphus Skinner, Deerfield; Vice Presidents, Squire M. Mason, New Hartford; Henry Rhodes, Trenton; David Uttly, Western; Calvary Wetmore, Vernon; Horatio Seymour, Utica; David Gray, Marcy; Eli B. Lucas, Kirkland; John J. Knox, Augusta; Henry B. Bartlet, Paris; Pliment Mattoon, Vienna; Corresponding Secretary, John P. Burgett, Utica; Recording Secretary, Benjamin N. Huntington, Rome; Treasurer, William Bristol, Utica; Managers, Israel Denio, Jr., Rome; Lucius Warner, Vernon; Chauncey C. Cook, Kirkland; Lewis Benedict, Verona, Lewis Eames, Lee.

Some of the premiums awarded were—On winter wheat 66 bushels, 56 bush. 54 lbs., and 41 bush. 9 $\frac{1}{2}$ lbs., per acre. On spring wheat, 34 bush., and

28 bush. 40 lbs. per acre. On Indian corn, 89 bush. 5 lbs., 79 bush. 48 lbs., and 75 bush. 12 lbs. per acre. On barley, 63 bush. 27 lbs., and 63 bush. 9 lbs., per acre.

B. N. H.

Rome, January 10, 1846.

The above is one of the most flourishing County Societies in the State, and is composed of a very active, intelligent, and enterprising set of men. We knew that Oneida was famous as a dairy county, but we were not aware that she was in the habit of turning out such heavy grain crops. It shows, however, that the Mohawk Flats and the fertile uplands are still good for large crops, when judiciously called upon to yield them. The Society has our best wishes for its success, and we are much obliged to our correspondent for his details.

CATTLE OF TEXAS.

THE following letter of President Houston was addressed to a gentleman in this city, and kindly handed us for publication. It is the best description of Texas Cattle we have yet seen, and we trust its publication may serve to call the attention of stock breeders to this interesting section of our country.

Galveston, Texas, Dec. 1st, 1845.

No present to me at this time could have been more acceptable than a fine Durham, as it is my intention to carry out the object which first induced my location in this country—that of stock breeding. The present condition of our country, in consequence of annexation to the United States, will leave men free to pursue the more pleasing and profitable business of agriculture and herdsmen, than has been allowed for many years to our citizens, while under the various influences of excitement and uncertainty. Fortunately for us, we shall soon be at rest, when our natural facilities will be inquired into, and our resources developed, by those who have capital and possess enterprise.

Doubtless no country on earth possesses equal advantages to Texas as a stock-rearing community. Stock here requires no feeding either in summer or winter, and costs no trouble nor expense save marking and branding. Salting is not necessary, as saltines or licks are in every part of the country; so that in fact, an ox weighing one thousand weight, or the most valuable cow, would not cost a farmer one cent in its rearing.

Our prairies are clothed with the most nutritious grasses, sufficient for countless herds. Heretofore, the Durhams have not prospered in this country; but this, to my mind, is readily accounted for. They have generally come by water, and remained on the seaboard, where the insects are more numerous than in the interior; and where, too, the climate is not so congenial to the constitution as the rolling country, not only of cattle, but likewise of horses. Some Durhams have been introduced from Missouri, and remained in the interior, about one hundred miles from the seaboard, and they have done well.

There is no good reason why blooded cattle or blooded horses should not do well in Texas, if proper care be taken of them the first year. The change of climate, from a northern to a southern latitude, will have an influence upon all animals, as experience has shown; this fact being known, should not be disregarded, while the animal is un-

dergoing acclimation. My opinion is, that November would be the most favorable month for the introduction of blooded stock, and that they should be fed on hay or corn-stalk fodder, with very little grain during the winter, and be kept sheltered. If this course were pursued, I am satisfied that there would not be more than one failure in twenty experiments.

The present stock of cattle in Texas is generally a mixture of Mexican, and cattle from the United States. They each show a distinctness of character. The Mexican (or Spanish) cattle are not so heavy or compactly built, but are taller and more active; nor do they weigh as well in proportion to appearance when slaughtered as the American cattle. They are more active than our cattle, with remarkably long, slim, and sharp horns: they are not so good for milk as ours. A cross of the breeds I consider an improvement, and for oxen decidedly so, for it blends the power of the American with the sprightliness and activity of the Mexican cattle. There is a fact in the natural history of Texas, which has heretofore claimed but little notice, and which seems to me not unimportant.

When the first colonists, under Mr. Stephen F. Austin, arrived in Texas, they found herds of wild cattle on the Brasses and its tributary streams. There was no tradition of their origin, nor has anything satisfactory on the subject yet been ascertained. They have receded as the settlements advanced, and are now above the Falls of the Brasses, and principally upon Little River. They are of a brindle or reddish color, and are represented by those best acquainted with them as more wild, and, when wounded, much more dangerous than the buffalo. The males have occasionally attached themselves to herds of tame cattle, and become very gentle. Calves have been caught by our pioneer settlers, and reared. The cross is said to be an improvement upon our common stock, imparting to their offspring an appearance, in color and proportion, of the wild cattle. The males I have been assured by hunters and other persons, are as large as the finest Durhams. I have seen work oxen, said to be half breeds, much larger than any others which have fallen under my observation in the United States or Texas.

For years past I have endeavored to procure the full bloods; but in consequence of other duties I could not use the attention necessary to ensure success. I will now renew my exertions with increased interest, and I hope it will be in my power to produce a cross of the Durhams with the original Texas cow. Should I be fortunate in my efforts, I shall be happy to apprise you of the result.

SAM. HOUSTON.

INDIAN CAKES.—Boil some corn meal, as mush, for five or six hours; then mix it as a batter, and add some wheat flour to make the cakes hold together and turn easily; and two or three eggs, with salt to season; bake on the griddle till brown.

MUSH.—It is very common to make mush by boiling only a few minutes. This is all wrong. It should be boiled one or two hours, and if longer it will do no harm. It will be necessary to occasionally add some water to keep the mass thin and prevent burning.

THE GRASS LANDS OF WESTERN NEW YORK.

If we draw lines from the outlet of Lake Erie to the northeast corner of Wyoming county, and thence to Pennsylvania, the tract of country south and west is not generally favorable to the production of winter wheat. It is of the kind called *grass land*. At its first settlement, however, winter wheat and all other crops of the Middle States were eminently successful, and the region was valuable for abundant production, and numerous springs and streams of excellent water, and the peculiar salubrity of its climate; exempt mainly, as it ever has been, from the ordinary diseases of a country recently settled.

At the first settlement of a thickly wooded country, grain must necessarily be the chief production, for domestic animals cannot be kept in large numbers. Of all cereal crops, wheat is the most valuable, and receives the greatest share of attention. But that which necessity reasonably originates, becomes, in the course of time, habit, and frequently continues in full force long after the cause has ceased. Thus it was, for many years, a part of the farming system in this region to sow winter wheat, where experience annually demonstrated that it could not succeed under the ordinary mode of cultivation. The farmers were discouraged. Expedients might have been attempted, but in the new land of the west they could do as they had done before. Custom had taught them to like the axe better than the plow, and emigration became the order of the day. Yet the soil was not exhausted. Spring wheat and a proper system of plowing the earth into beds so as to drain the soil, were scarcely known, and yet more rarely practised.

Strange whims and conceits existed here. Many people believed that not only would cattle and horses refuse to eat clover hay, but that if eaten it was poisonous. Others thought that the land must be seeded down after clearing, and that in the end the good grass would die out, and that it *must* be let alone, for if once plowed up it would be destroyed for ever. And so it would have been. Under the operation of a retentive soil, an impervious subsoil, and a surface abounding in the inequalities called cradle-knolls, sufficient plowing to raise the land into ridges, so that the water might escape, was nowhere more necessary; and abundant examples now illustrate that it has been followed by effects the most beneficial. It may be added, that the first crop raised in doing this, will at *least* repay the expense incurred.

There has been much speculation as to the causes why winter wheat cannot now be produced. It is generally supposed, even among chemists, that they result from a deficiency of lime in the soil. But if so, would not the production of spring wheat be also affected? In fact we must not look exclusively to chemical causes for an answer to the question. The soil is for the most part light loam, friable, often abounding in vegetable matter, and very retentive of moisture. The subsoil generally approaches the surface, and is composed of sand, pebbles, and clay, forming an exceedingly compact mass, or hardpan, scarcely to be broken at all by the common plow, and through which water cannot penetrate, except in small quantities. The rain is therefore retained on the surface. The upper soil

acts as a sponge, and under the influence of frost, becomes mixed with ice so as to bear a resemblance to a honey-comb. Hence, as soon as the fibrous roots of the trees (which, while they remain, prevent heaving) have decayed, winter wheat is actually lifted out.

What may be the effect of the subsoil plow by producing mixture of the hardpan with the upper soil we shall hereafter state from the result of experience. It is a common idea that the hardpan contains lime, and would thus correct the supposed deficiency in the upper soil. Some specimens having been subjected to severe chemical tests, with a view to giving the result, it was found that they yielded scarcely a trace of lime. Yet as the deeper hardpan is not so impervious to water as that near the surface, and as it crumbles upon exposure to the air, there is room to hope that its effects would be highly beneficial; and particularly so to the growth of winter wheat.

Spring wheat nowhere yields better grain or in greater abundance. Nor is it easy to find any region where, with the same amount of cultivation, can be raised better crops of barley, oats, flax, buckwheat, beans, turnips, carrots, parsnips, and potatoes; while as to grass and clover it is probably excelled by no portion of the Union. Two tons of hay to the acre are far from being an unusual crop; it is the quantity commonly obtained from land well seeded down and occasionally manured. The quality of the hay is excellent. The same retention of moisture which prevents the growth of winter wheat is admirably favorable to grass. It is long before a summer drought is felt, and the grass, suffering little from this cause, grows luxuriantly in the fall, and sprouts up in the spring as early as in any part of the State.

From causes already mentioned, the price of this land has greatly decreased. Discouraged by the bad success of bad farming, many are anxious to sell at low prices. There are instances where half-cleared farms have been sold for \$4 to \$5 per acre, and good grazing farms, with the common buildings of the country, can very easily be bought for \$8 per acre, even within twenty or thirty miles of Buffalo. Assuming the average price of wheat land in this State to be about \$40 per acre, five acres of the former can be bought for one acre of wheat land. If four sheep can be kept on one acre of the grass land of this region (and most farmers say this is below the average capability), it is easy for any practical farmer to determine how the profit from twenty good sheep, after deducting the necessary expense, compares with the profit, after similar deduction, from the average annual produce of one acre of wheat land.

As neat cattle thrive here, it is found that the butter and cheese of this district, when properly made, cannot be surpassed. Access to railroads, Lake Erie, and the canals, renders transportation to the seaboard cheap, safe, and rapid, whilst the consumption of provisions in the cities of Rochester and Buffalo furnishes a ready market for any surplus of such productions as are of a perishable nature, or too bulky for distant transportation. Probably no great length of time will elapse, before well-fed beef, mutton, and pork, will be sent hence to Albany, Boston, and New York, and a larger

profit realized than by selling the animals in poor condition to be driven some hundreds of miles to the neighborhood of those cities, and then fattened where the materials for doing so are highly expensive. Such, at all events, has been the result of railroads in Great Britain. Here is one great advantage over the western States. This, and the present low price of the land, as well as the salubrity of the climate, may well be subjects of consideration to those who are about to emigrate.

It is common to think everything without value, which, if not cash, has not some approximation or convertibility into cash; and yet simple-minded folks have sometimes thought that cash itself is only profitable so far as it can procure happiness for ourselves or those whom nature or friendship has attached to us. Some, too, who have travelled in many countries, have at least fancied that cheerful scenery has a strong tendency to make cheerful those who live surrounded by it. Such people, though they may wish more frequently to find here those tokens of human well-being—neat farm-houses and thriving sheep and cattle of the most useful kinds, will yet see that the hand of intelligent improvement has in many places been at work, and must be delighted with the fertile valleys and the beautiful hills, everywhere capable of high cultivation, which characterize the grass lands of Western New York.

R. H.

Buffalo, Feb., 1846.

SEEDLING POTATOES.

SOME time ago I promised to give you an account of my seedling potatoes. If they possess no other recommendation, they are entirely free from the disease so prevalent all over the world. I have lately gone through my bins containing nearly two hundred bushels, and after carefully inspecting them, found *every one* perfectly sound. My neighbors have not been so fortunate for the last two or three years, and I attribute my success to my method of preparing the seed, and subsequent culture. I cut two eyes to a set; after which they are spread over a barn floor to dry for six or seven days before putting them into the earth, and during this time, each set is carefully examined *by handling*, to ascertain the fact of its drying and shrinking properly. Occasionally one or two soft ones are found, which are discarded as worthless; the good sets will always dry up, and yield but little to the pressure of the finger, and these alone are planted. As soon as the vines show themselves above ground, I top dress them with slaked lime, 40 bushels to the acre, hoeing only twice, but using the plow as often as necessary, to keep down the weeds.

For the last three years I have gone through the same operation with other potatoes, not seedlings, and have invariably lost one-half of my seed by their not standing the drying test; but it is better to lose half the seed than half the crop. In cutting carefully a potato that is in part affected, you can remove the diseased portion, and by submitting the seed to be dried, ascertain its fitness for propagation.

I have found the disease showing itself in a spot no larger than the head of a pin, and then gradually spreading over the whole potato; is not this a sufficient objection to the planting of whole roots?

I prefer liquid manure to any other for potatoes, and in fact for every vegetable. My opinion is the result of several successful experiments with this essence, but before giving them to you, I will describe the pit in which I collect all juices and offal. It is 6 feet deep, 60 feet long, and 20 feet broad, with a good tight clay bottom, and stoned up on all sides. My cow shed is on the north side, and the floors of the stalls and passages incline sufficiently to allow the fluid excrements to reach the pit without resistance, and the solids are thrown in at each cleaning of the stable. The inclination of my yard is also towards this receptacle, and the wash from it I consider important. By means of a pump I draw off the liquid when wanted, and with a hogshead placed on a roller, roll and irrigate my meadows simultaneously. Last season I tried the fluid for potatoes. I plowed half an acre of ground, and after harrowing it well, passed the roller over with the sprinkling apparatus attached; put on about 8 tons of the liquid manure, together with 2 bushels of salt, then followed again with the plow, previous to planting the seed. Notwithstanding the drought, the crop harvested from the half acre was 170 bushels of a very large size, many of them 4½ inches in diameter, and very few under 3 inches. I never saw a more even crop in my life. For gooseberries, raspberries, &c., there can be nothing better than manure in a fluid state, and vines thrive better and produce much finer fruit when it is used. In fact, no plant is more benefited by this application than the grape. I believe even in this country it is quite a common thing to see a gardener dipping the roots of plants intended for transplanting, into a paste made of urine and clay, or any earthy substance. When this is done all flourish, and no sheltering from the sun is necessary.

The use of liquid manure, as a fertilizer, is not a novelty. On the contrary, the Chinese, Germans, and Italians, have for ages paid great attention to the collection of urine, and to the manufacture of substitutes, and many artificial mixtures have been made with great success. In England, scarcely a farm is without its cistern to hold the juices and wash of the barn yard, the farmer being obliged to husband everything in the shape of food for the land. And when chemistry steps in and tells us the valuable properties of these fluid excrements, that man must be obstinate indeed who will not save all and pay some of his dues to the earth with this valuable liquid. It is an admitted fact, that all composts, bones, lime, magnesia, &c., are dissolved by some means before vegetables will notice them; hence, in presenting a fluid manure to them, as the salts of the urine have a forcing power, vegetation immediately commences. The improvements that are constantly being made in the agricultural world, and the wonderful facts brought to light by the aid of science, show clearly the growing interest evinced in making the earth bring forth its full fruits. Common sense tells us the earth must be fed, or it will become exhausted; and to avoid the fate of one of our Southern States, let us collect and preserve everything containing the necessary elements of vegetation.

Wm. B. ODDIE.

The Meadows, Rockland Co., Jan., 1846.

Ladies' Department.

INSECTS.—No. 2.

From the Diary of an Old Lady.—March 1st, half past four o'clock. A fine bright morning, promising a spell of weather that should put housekeepers in motion.

The first day of spring brings with it a train of thoughts—of anticipated pleasures—and a crowd of business. My household all in motion, and I only wait for breakfast and daylight to begin a strict, though quiet investigation of closets, cellars, and other unexplored corners that have rested in peace since the cold weather set in. To-day I must prepare the trunks and closets that are to receive blankets, furs, and carpets, for the summer; not that we can yet dispense with them, but the moths are beginning to take wing, and they must be looked to.

2d.—Visited the flannel closet, and found moths suspended from the ceiling and on the walls—a few had already taken wing; but the largest portion are still in their little sacks, waiting the next warm weather to change into the fly, and deposit their eggs on the first woollen garment that they meet with out of use, or carelessly left in their way. It is a common error that moths love dirt—it is not so; but they do love to live with a careless housekeeper, where they can feed unmolested on the woollen cloths that are suffered to remain in dusty closets or garrets that are seldom visited by the brush. Moths, in common with all insects, deposit their eggs on or near the food best suited to the young grubs; the eggs soon hatch if the weather be favorable, and the worms feed for five or six weeks, when they leave their food, and suspend themselves in their sacks on the walls, or in corners of closets, drawers, and where they must be searched for and destroyed. There are many species; some feed on fur, some on wool, and some on skin; thus an old neglected hair trunk may supply moths enough of various kinds, to ruin half the valuable clothes in the house; for in the absence of their proper food, they devour all woollens indiscriminately. Must give strict orders to have the hair trunk well examined—troublesome things—determined never to have another. Visited the meat room, found moths in their sacks hanging on the wall—wondered what could take them there, when, on a strict search, found to my astonishment that they were feeding on the skins of the hams—a new species to me, and therefore to be carefully preserved in my cabinet, and their pictures taken.

Explanation.—1, Ham moth; 2, worm partly projecting from the sack.

12th.—The moths I found feeding on the hams have taken wing. They



HAM MOTHS.—FIG. 28.

are of a small size; pale yellowish brown with a slight golden lustre; the under wings of the same color, but much paler. The worm never entirely leaves the sack; but when feeding or in motion, projects its head and four front feet out, clinging with the hind feet to the inside of the sack, thus prepared to retire under cover on the slightest danger.

Both ends of the sack are open, and it walks with equal ease, backwards or forwards.

The mice, too, are now to be carefully looked after; they are making nests in band-boxes, in my summer bonnet, and other inconvenient places, where they imagined they might bring up their little families in peace and prosperity; but they did not know me, they are new comers.

14th.—Betsy tells me that the cockroaches are beginning to show themselves in the kitchen—nasty things! and should never be allowed to rest in peace in a well ordered country-house! therefore, I will send for plenty of spirits of turpentine this very day, and this evening will pour it into every crack and hole about the kitchen, which will drive them out; and, on their appearance, a stream of boiling water from the kettle shall prevent their return. It is not true that if you kill one, ten will come to the funeral; the person who first said that was either ignorant of their history, or she was *too lazy* to take measures to kill them. The cockroach which infests our houses (*Blatta orientalis*) was originally taken from Asia to Europe, and from thence to America. It deposits its eggs in warm places, near ovens and under hearths, where it delights to pass the remainder of its life. It lives three years, and undergoes no other changes than frequently casting off its skin, like the crab, whenever it has grown too large to be comfortable in the old one, and on the third year gains a pair of wings; it has then arrived at maturity, and deposits a number of eggs enclosed in a dark brown case of a bean-like appearance. They increase with great rapidity, but may soon be destroyed if diligently looked after and killed. Turpentine poured into their haunts will instantly drive them out, when boiling water thrown on them will effectually destroy them. Red lead, Indian meal and molasses, mixed in equal proportions, and placed in their way, will be devoured greedily by them, and proves certain poison. Nothing appears to come amiss to their appetites, either animal or vegetable; but wet, dirty dish-cloths appear to be their peculiar delight; and should you visit the kitchen an hour after the family are gone to bed, you will find such articles blackened by their numbers. A pan of boiling water placed under such articles, and the cloths dropped in, will prove an excellent trap. A week's diligent search will clear a house, unless they have been suffered to increase for years. Their vile habits and disgusting odor make them dreaded by every one; yet they are suffered to remain in most houses without molestation.

Having made these discoveries, it is my determination that all the pleasant weather of this month shall be devoted to a careful cleaning of all the cellars, closets, store rooms, and neglected crannies, and that neither water nor white-wash shall be spared; but it shall be done quietly and in order, and with as little inconvenience to the family as the nature of the case will admit. I do not wonder that men and the seamstresses of the household complain of bustling housekeepers—I shudder when I think of them. A bustling housekeeper is seldom an economical one; for while her peculiar occupation is attended to, everybody else must stop theirs, thus only half the household machine is effectually employed, while all is in motion and wearing out.

16th.—Salmagundi says Aunt Charity died of a Frenchman! now I am sadly afraid I shall die of a woodpecker! for, of all animated things, they rouse my curiosity the most. The day is cold, and a light snow is falling, looking very beautifully, but not very tempting to leave a warm fire and my writing table to go into the orchard; but all day I have been attracted to the window by a scarlet-capped, white-bosomed, dandified woodpecker, who, by his business-like air and earnest manner of prying into all the holes and corners about the trunks of the trees, convinces me that there are secrets to be discovered that I am not willing he should keep to himself, however glad I may be of his assistance in discovering them: besides, I am much interested in a bunch of dried leaves that has dangled on the branch of a plum all winter, having more meaning in it than people suspect, or I am much mistaken. The long-handled rake shall help me to that secret; so snow and cold to the contrary, notwithstanding, I will go—better die of cold than of a woodpecker!

Well, here I am back again. The day is not as cold as I thought. My thick coat and wadded hood have kept off the light snow, and my gum shoes prevented my feet from suffering, while I fully gratified my curiosity. The bunch of dried leaves proved a screen to a cocoon that I shall be glad to watch, as I suspect it to be the winter home of a large green worm that was feeding on the tree last summer. The woodpecker was in search of the worm that is so destructive to the apple orchards, and had succeeded in destroying many that were sufficiently near the surface for his curious long tongue to reach; but the older ones had gone too far for him, and required some contrivance on my part to find them; a piece of stout bonnet wire I find very effectual. Some had gone beyond the reach of the wire; but I am told that mercurial ointment filled into the hole will poison them—I will try to-morrow.

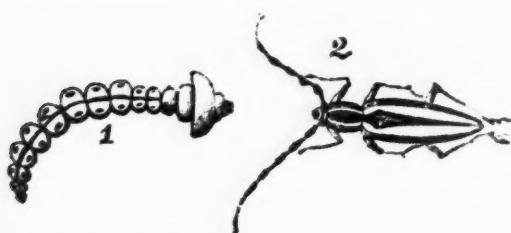


FIG. 29.

This worm is much to be dreaded, and carefully guarded against. It is the larva or young of a beetle called *Sapuda bivittata*. The face and lower part of the body is white; the wings and head are marked by two white and three cinnamon brown stripes, from the eyes to the tips of the wing cases; the horns or antennæ are longer than the body, they are from one-half to three-quarters of an inch in length. They begin to appear early in June, escaping from the tree in the night, which is their time for flight and motion, concealing themselves during the day among the leaves of the trees on which they feed. The eggs, which are of a pale grass-green, are deposited under the loose bark of the tree, from three to twenty in number. In favorable weather the young worms soon hatch, and penetrate the bark. During the first year they are

easily destroyed, as they live in or immediately under the bark; the second year they penetrate one or two inches into the wood, and during that time they are in reach of the woodpecker or a piece of wire; the third and last year they become more voracious and much larger, and penetrate a foot or more into the body of the tree. Their path is always upwards, and as they arrive at maturity bore near the surface, and lie concealed under the bark while in the pupa state. When its transformation takes place, it gnaws a hole in the bark and makes its escape; therefore, the first clear warm afternoon, the girls shall go with me, and with pruning knives and wire in hand, will share the sport with the woodpeckers; and if I hear of any of the boys killing a woodpecker, I won't say what I will do, but I think I shall hand them over to a smart rubbing with the oil of hickory!

THE GARDEN.

THE month of winds and storms, noisy, boisterous March, has forced himself into notice, like a great overgrown school-boy, who, having missed lunch, rushes home ravenous for his dinner, and is quietly told to wait patiently, for it will not be ready this half hour.

In these rapidly lengthening days and warm sunshine, we feel that spring has come indeed; and if we do not hurry our preparations for gardening, we shall be caught napping by bright, showery April, all smiles and tears, and birds and flowers, before we are half ready for it. Those beautiful harbingers of spring, the modest snowdrop, the crocus, the green and yellow hellebore, and the mezereon, with its clusters of dark rose-colored flowers, have bloomed amid alternate storms and calms, and are no more seen; all but the last have withdrawn to their earthy beds, to enjoy another ten months sleep. It warms my very heart to look out upon the sheltered borders, and see the gay daffodils and merry-looking purple polyanthus, nodding to welcome each other to life and light—and the violets shedding their fragrance from every sunny bank. The hearts-ease, which have cheered us all winter, are so common now, even in the garden walks, that they would be scarcely worth noticing, were it not for a sort of individuality in each flower, a saucy, good-natured confidence, in its quaint way of looking up at one, as if to say, "I am laughing at you!" that one cannot choose but gather, and love them.

Here is a merry blackbird too, perched on the topmost twig of yonder red maple, carolling like any mocking bird, and making as much noise as if he alone was worth attending to in this busy work-a-day world—but there is no time to listen to music now, for everything hurries me to look after my vegetable treasures.

E. S.

HINTS TO LADIES.—Stair carpets should always have a slip of paper put under them at and over the edge of every stair, which is the part that first wears out, in order to lessen the friction of the carpet against the boards beneath. The strips should be within an inch or two as long as the carpet is wide, and about four or five inches in breadth. This simple plan, so easy of execution, will preserve a stair carpet half as long again as it would last without the strips of paper.

Boys' Department.

USEFUL AMUSEMENTS FOR BOYS.

On most farms the care of young stock belongs to the women and boys. The boys should make the care of calves their own.

Calves should never be allowed to suck after the first day. When they have filled themselves well with the *first* milk, they should be taken away and confined in the barn; and until the milk becomes good for use, it should be taken from the cow, and fed by hand to the calf. It will soon learn to drink, if a finger be put in its mouth and its muzzle in the milk. At the end of three or four days, it should have no more new milk. When the milk has been skimmed, let it be warmed and given to it. The calf will not be so fat and look so sleek as if fed with new milk, but will grow in frame as fast, and be as large in size and bone, as one fed on new milk, if it have enough; the reason of this is that the cream skimmed off the milk only makes fat, and does not make flesh or bone. Feed the calves well with good sweet skim milk at regular periods, say three times a day, and give them good pasture, and by fall they will be of good size. Always treat them kindly, and make them gentle. This will give you good and kind cows, if the calves be heifers; and good and gentle oxen if they be steers. In the fall either make yourself, or get made, a small yoke, put it on the steer calves, and accustom them to it, and commence breaking them. In the winter, after they have become docile, hitch them to small sleds and draw little loads of wood. By spring the steers will be well broken.

ANOTHER POULTRY ACCOUNT.

You may remember, boys, that last April, I gave you a copy of my poultry account for 1844. Now if you are so inclined, I will overhaul the account for the past year. But before we go to the figures, I will tell you of sundry mishaps and blunders, which have had some effect on the profits, for by the errors of others you may learn as much as by their success.

First, then, not having a proper yard enclosed, I had to keep the fowls during the summer shut up in their house (21 ft. by 12) until afternoon, as I was planting immediately around the building. This confinement, and limiting their food entirely to corn, when they should have had a variety, such as oats, buckwheat, a little wheat, and some butcher's offal, or scraps of meat, induced a dis temper among them, by which some dozen or more were carried off; and causing a great falling off in the eggs. Then again all the broods of early chickens were completely destroyed by a certain little animal, which it is not polite to name, and which we must therefore spell, viz., *l-o-u-s-e*. I soon found that a few drops of sweet oil, or a little fresh lard, well rubbed on the back of the head, and on the wings of the chicks, immediately on taking them from the nest, was a perfect remedy—so much for Dame Partlett's family.

The Gobbler's family was even more unfortunate, for of the four turkeys that survived the winter, three were killed during the summer, and of about

fifty chicks, four only exist at this present. Now these calamities happened on this wise. The old fowls, having their wings clipped to prevent roosting on trees, fell a prey one night to sundry unruly dogs, who took advantage of their crippled condition, and the little chicks suffered in various ways from a want of that important requisite, "the master's eye." An unsightly heap of brush, in the neighborhood of the coops, afforded shelter to that sneaking rascal, "black rat," who cut the throat of every unfortunate chick that came within his domain. One night some frisky young Berkshires escaped from their pen, for lack of a few nails driven in time, and played such pranks among the coops, that the account of killed and wounded the next morning was quite a serious affair. Neither did the geese entirely escape. Theirs was a case of killing with kindness. The man who had charge of the live stock, believing, like many a better educated one, that "good living," and "plenty of it," was the great good of earthly existence, dealt out the corn so liberally that by reason of excess of fat, two only, out of twenty-four eggs from the two geese, contained the living principle, and of these one only hatched, the other suffering from a lack of patience in —, I wont tell who. Now then, having got through the chapter of accidents, let us look to the cyphering. I commenced the year with the following stock, viz. :

	Dr.
Jan. 1. To 44 hens 6 cocks, a 25 cts.	\$12 50
" " 6 turkeys, a 62 1-2 cts	3 75
" " 4 geese, a 62 1-2 cts.	2 50
	\$18 75
Feb. 25. To cash for 15 hens, a 25 cts.	3 75
Jan. 30. " " 22 geese, a 50 "	11 00
Aug. 14. " " 6 young ducks,	1 00
Nov. 14. " " 5 common do.	1 25
" " 1 p'r Muscovy,	1 13
Dec. 31. " 61 1-2 bush. of corn, a 62 1-2 cts.	\$18 13
" " labor picking geese,	38 44
	88
	\$76 20
To balance (profit),	44 25
	120 45
1845.	Cr.
Dec. 31. By 3660 eggs used or sold, a 1 1-10 c.	\$40 15
" " 25 chickens do. do. a 25 c.	6 25
" " 3 turkeys do. do. a 62½ & \$1,00,	2 25
" " 6 ducks do. do. a 37 1-2 c.	2 25
" " 23 geese do. do. a 6 c. per lb.	15 67
" " 35 lbs. geese feathers, a 50 c.	do. 17 50
" " 16 bush. hen manure, a 12½ c.	do. 2 00
	86 07
Dec. 31. By stock on hand, viz.:	
103 fowls, a 25 c:	\$25 75
7 ducks, a 37 1-2 c.	2 63
4 turkeys, a 75 c.	3 00
4 geese, do.	3 00
	\$34 38
	\$120 45

The result, you see, although not quite equal to 1844, is not to be despised. The geese are not the least profitable part of the stock. They are the large white Bremen variety, weighing, dressed, from 10 to 15 lbs. They are confined in a lane which gives access to the different fields, and in which there is a large artificial pond, with a good supply of water, even in the driest seasons. L.

FOREIGN AGRICULTURAL NEWS.

By the steamship Cambria, we are in receipt of our foreign journals to February 4th.

MARKETS.—*Ashes* in limited request. *Cotton* remains in price as per our last, and was quite firm. A small advance is anticipated as soon as money becomes easier. *Flour* no change. *Beef, Pork, and Cheese*, slow of sale. *Lard* has fallen rapidly. *Tallow*, a slight improvement. *Tobacco*, without alteration. *Wool* has advanced and was purchased freely.

Money was still scarce and in much demand.

Important Alterations of Duties on American Produce.—The British Ministry propose to make important reductions on many of the articles exported from America to England. We hope to see a similar spirit manifested by the cabinet at Washington. The alterations comprise—

	Previous duty.	Reduced to
Bacon, - - -	14s per cwt.	Free.
Beef, fresh, - - -	8s per cwt.	Free.
“ salted, - - -	8s per cwt.	Free.
Hay, - - -	16s per load.	Free.
Hides, - - -	2d per lb.	Free.
Meat, - - -	8s per cwt.	Free.
Pork, - - -	8s per cwt.	Free.
Buckwheat, - - -		1s per quarter.
Butter, - - -	20s per cwt.	10s per cwt.
Candles—Tallow, - - -	10s per cwt.	5s per cwt.
Cheese, - - -	10s 6d per cwt.	5s per cwt.
Clocks, - - -	20 per cent.	10 per cent.
Hams, - - -	14s per cwt.	7s per cwt.
Hops, - - -	90s per cwt.	45s per cwt.
Indian Corn, - - -	heavy duty.	1s per quarter.
Rice, - - -	6s per cwt.	1s per quarter.
Tallow, - - -	3s 6d per cwt.	1s per cwt.

There are many other articles manufactured by the American artizan which may be exported to England with advantage, provided this new tariff is carried out.

There seems great inconsistency in admitting American bacon free, and charging hams (the other part of the pig) with a duty of 7s per cwt. We advise our friends to cure the whole side, including the ham, which in this country is called “A gammon of bacon,” and is estimated a “dainty dish,” but do not overdo it with salt. In a few packets hence we will forward to our New York agents recipes for curing bacon, adopted in three most celebrated counties in England, viz., Hampshire, Wiltshire, and Cumberland, which may be had on the application of a letter, post-paid.

Mutton Hams, cured, are, in England, held in high estimation by the epicure. These could be imported free as salted meat; and our recollection of the prices on a late tour through the States, leads us to the expectation that the exporters would make money by the speculation.—*European Times*.

Spanish Sheep.—We have recent advices from Messrs. Taintor and F. M. Rotch, who are now in Spain, busily engaged in looking over the Merino flocks of that country. They seem determined to bring away something valuable if to be found, no matter what may be the risk, trouble, and expense—to say nothing of their fatigue and danger in traversing so rude and disturbed a country.

Mr. John P. Norton, our Edinburgh correspondent for the past year or more, has been on a tour in France and Germany, and being very much engaged, has been obliged to discontinue his letters for the *Agriculturist*. He will probably leave England for the United States this month. It rejoices us to announce, that he has won the £50 (nearly \$250) prize of the Highland Agricultural Society for the best analytical investigation of the organic and inorganic parts of various kinds of oats, grown on different soils, and by different manures.

The paper is to be published entire by the Society. This is no small feather in Mr. Norton's *chemical cap*, and does honor to the American name.

To Prevent the Return of the Disease in Potatoes.—The board of Trade in Holland has published the following rules to be observed as a preventive of the potato disease:—1. To leave the potatoes in the ground until very dry weather occurs. Experiments having shown that their decay is accelerated by being taken up, it is advisable to leave them in the ground at first, in order to get dried, and afterwards to lay them out over the field. This would have the double advantage of rendering the vegetable more wholesome, and of preserving it. 2. The following applies especially to those potatoes to be used as seed for next year: It is necessary to beware of planting those plants which have been attacked by the disease. They must be carefully chosen from those whose stalks have not been attacked, and placed in a situation free from the slightest damp. As the disease has been less severe in gravelly than in clayey soils, the tubers should be chosen from those gravelly soils where the disease has not penetrated. 3. The withered leaves of diseased potatoes, which are of no value, should be immediately burnt; the same should be done with the rotten potatoes, which cannot be of any use. Nothing should remain of them. 4. It is necessary to avoid as much as possible planting potatoes in the same spots where they have been planted this year, for it is most probable that seeds of the fungi have remained in these places, and there would be great risk of the ensuing crop being similarly attacked. 5. If notwithstanding every effort, the disease should again break out next year, the moment the first symptoms of it are perceived, the first leaves that turn yellow should be taken off and burnt, or the entire field should be watered towards evening with lime water, or still better, with diluted sulphuric acid so as to destroy the seeds of the cryptogamous fungi; sulphuric acid, moreover, prevents rotting, and when prepared as above directed, can do no injury to the plants themselves.

Increase of Stock in New South Wales.—Our flocks and herds continue to increase. We had on the last day of 1844 nine thousand horses, one hundred and forty-two thousand head of cattle, and five hundred and fifty thousand sheep, more than we had on the last day of 1843.—*Simmond's Colonial Magazine*.

Steep for Seed Wheat.—Sulphate of soda (Glauber's salts) is dissolved in water in the proportion of 25 lbs. to 31 gallons of water. With this solution the wheat laid upon a paved or slabbed floor is sprinkled, the whole being meanwhile well turned till the grain will absorb no more of the liquid. Twelve pounds and a half of sifted quicklime are then added to each 8 bushels, taking care to mix the seed as carefully as possible. The seed thus prepared should be sown immediately. The sulphate of soda, which is composed of sulphuric acid and soda, combines with the lime; the lime forms sulphate of lime or gypsum; the caustic alkali acts on the diseased germs, and the calcareous salt stimulates the grain.—*Ag. Gaz.*

Potatoes.—It has been the observation of myself and others that the pigs fed on the infected Potatoes have fattened faster than on those that were not damaged, and I think Liebig accounts for this in his theory or the change that has taken place in the darkened parts of the potatoes. I had an acre of potatoes planted early, and though most of them were injured, yet I do not find them become worse. The great thing is to keep them dry. I find cows and sheep use them readily, and thrive upon them. I have planted potatoes this autumn, and some where the infected potatoes grew, and am inclined to think that I shall have as good a crop there, and as free from damage, as elsewhere.—*Ib.*

Editor's Table.

THE NATIONAL PRESS.—A new family paper is to be started by Geo. P. Morris, Esq., well known as one of our most beautiful song writers, and the editor of the Mirror. It is to be a Journal for home; a repository for letters; a record of art; and a mirror of passing events. To be published every Saturday, at \$2 a year in advance. We presume the brilliant Willis, the *fidus Achates* of the gallant Brigadier, will be associated in some way with the above journal. Of course it is bound to be fashionable, racy, witty, and all that sort of thing.

THE COMMERCIAL TIMES.—This is a daily and semi-weekly paper recently published in New Orleans. It is neutral in politics, and aims to make itself useful to the commercial and agricultural class. It has a strong corps of editors, and is conducted with ability. Thomas Affleck, Esq., of Washington, Miss., so favorably known as a contributor to this periodical, has the control of the Agricultural Department. The Times is of large sized paper and neatly printed. It has every promise of a good circulation, and our best wishes for its success.

BRITISH MAGAZINES AND REVIEWS.—(Office, 112 Fulton Street, New York.)—Leonard Scott & Co. have been recently issuing their elegant reprints of the January numbers of the best periodicals published in Great Britain, and we would recommend all our readers who may be inclined to subscribe, to lose no time in doing so. The forthcoming numbers will, we have little doubt, be peculiarly valuable to the farmer, as they will in all probability contain the most authentic expositions of the opinions of the leading parties in England on the most absorbing topic of the day—the Corn-Law Question; and this is a matter in which not England alone, but the whole world is interested. Price for the four Reviews and Blackwood's Magazine, when taken together, \$10 per annum. Single Reviews \$3 per annum—Blackwood, \$3. The four Reviews comprising the series are—the London Quarterly, the Edinburgh, the Foreign Quarterly, and the Westminster.

LIBRARY OF CHOICE READING.—*Foreign Series.* Under this title, Wiley & Putnam, 161 Broadway, are issuing a series of classic foreign works, at the low price of 50 cents per volume, which do honor to them as publishers. They have just sent us Two Parts of Tasso's Jerusalem Delivered, translated by Fairfax, with a Memoir of the author and translator, and a preliminary critique by Leigh Hunt. Of the unhappy Tasso and his immortal poem, the literary world has been enamored for more than two centuries and a half, and as time advances, they gain rather than lose in interest and reputation.

STORIES FROM THE ITALIAN POETS, in Three Parts, by Leigh Hunt, is a summary in prose, of the poems of Dante, Pulci, Boiardo, Ariosto, and Tasso; with comments throughout, occasional passages versified, and critical notices of the lives and geniuses of the authors. This is a most delightful book, and highly useful to the student of Italian literature. Mr. Hunt seems to have written it *con amore*, and in his most agreeable style.

LETTERS FROM ITALY, by J. T. Headley, is a charming work, and fresh almost as if nothing had been written for the past ten years from the land of clear skies and fine arts. He gives several interesting letters on its agriculture, extracts from which we intend to make hereafter:

THE ILLUSTRATED BOTANY.—Edited by John B. Newman, M.D. Published by J. K. Wellman, 118 Nassau Street. Price \$3 a year. This is a monthly publication, the first No. of which contains four beautiful colored engravings, after nature, of various choice

flowers, and a lithograph of the *lilium candidum*, with all its parts. It is got up in beautiful style, and it is intended that it shall comprise engravings of the most valuable native and exotic plants, with their history, medicinal properties, &c. This is a highly valuable publication, and we wish it success—the ladies will particularly admire it.

LIFE IN CALIFORNIA, during a Residence of several years in that Territory; comprising a description of the country and the Missionary Establishments; with observations, &c. Illustrated with numerous Engravings. By an American. To this is annexed a Historical Account of the Origin, Customs, and Traditions of the Indians of California, translated from the original Spanish manuscripts. Wiley & Putnam, 161 Broadway. California has now become a place of emigration for our countrymen, large numbers of whom are rapidly wending their way thither, with a view of permanent settlement. The publication of this book, therefore, is highly opportune. We have no doubt that California will be one of the Territories of the United States within ten years, and have a Representative in Congress at Washington. We do not care how rapidly the Anglo-American race people this continent, for they are the *most worthy*. Their superior intelligence, morality, and enterprise, will soon ensure them the whole of America, from the Isthmus of Darien to the North Pole.

PHRENOLOGY EXAMINED, by P. Flourens: translated by Charles D. Meigs. Published by Hogan & Thompson, Philadelphia, is a valuable little work of 144 pages, in which the general principles of Gall's doctrine of phrenology are combated with vigor and ability.

EUROPEAN AGRICULTURE. By Henry Colman. Part V. of Vol. 1 has been issued the past month by A. D. Phelps, of Boston. Saxton & Miles, agents, New York. The portion of the present number of Mr. Colman's work which has most interested us, commences at the "Plowing Match at Saffron Walden," and so continues to the end. His observations on English plowing deserve the attention of our farmers, and we are confident that they cannot but peruse them with interest and instruction. He goes pretty thoroughly into the subjects of surface soil, subsoil, sub-turf, and trench plowing. He also takes up harrowing, scarifying, and grubbing, subjects nearly as important as plowing, giving the beneficial results of these operations in English farming. Upon the whole, we like the latter part of this number better than anything which has yet appeared in Mr. Colman's work.

MR. VALK'S COUNTRY SEAT.—We call attention to the advertisement of Jacob R. Valk, Esq., in this No. of our paper. We have often visited his beautiful country-seat, and can say that it is all it is represented to be. The conservatory is the most magnificent thing of the kind in the United States, and few in Europe equal it.

AGRICULTURAL SCHOOL.—By reference to our advertising columns, it will be seen that Mr. Wilkinson has opened an Agricultural School, near Poughkeepsie. His location is healthy and pleasant, and we understand he is well prepared for the reception of scholars.

IMPORTANT DISCOVERY.—The St. Louis Missourian says that wild hemp has been found in the State of Missouri. A farmer from St. Louis county, being in a hemp warehouse, accidentally saw some Manilla hemp, made inquiry what it was, and upon being informed, said he had produced something exactly like it from a weed upon his farm, and that he would send in a sample, which he did, and it proves to be a variety of the Manilla hemp, resembling almost the New Zealand hemp; but it is said to belong to the same genus as the New Zealand, Sisal, and St. Domingo hemp, from which all our heavy cordage is made.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, FEBRUARY 23, 1846.

ASHES, Pots,	per 100 lbs.	\$3 87½	to	\$4 00
Pearls,	do.	4 19	"	4 25
RALE ROPE,	lb.	5	"	7
BARK, Quercitron,	ton,	25 06	"	26 00
BEANS, White,	bush.	1 12	"	1 25
BEESWAX, Am. Yellow,	lb.	28	"	33
BOLT ROPE,	do.	12	"	13
BONES, ground,	bush.	40	"	55
BRISTLES, American,	lb.	25	"	65
BUTTER, Table,	do.	16	"	25
Shipping,	do.	9	"	13
CANDLES, Mould, Tallow,	do.	9	"	11
Sperm,	do.	25	"	38
Stearine,	do.	20	"	25
CHEESE,	do.	5	"	10
COAL, Anthracite,	2000 lbs.	5 50	"	6 50
CORDAGE, American,	lb.	11	"	12
COTTON,	do.	6	"	10
COTTON BAGGING, Amer. hemp,	yard, Kentucky	13	"	14
FEATHERS,	lb.	12	"	13
FLAX, American,	do.	26	"	34
FLOUR, Northern and Western,	bbl.	5 50	"	5 87
Fancy,	do.	6 00	"	6 50
Southern,	do.	5 50	"	5 87
Richmond City Mills,	do.	6 62	"	6 75
Rye,	do.	4 00	"	4 12
GRAIN—Wheat, Western,	bush.	1 15	"	1 25
Southern	do.	1 12	"	1 20
Rye,	do.	80	"	82
Corn, Northern,	do.	68	"	70
Southern,	do.	67	"	69
Barley,	do.	62	"	65
Oats, Northern,	do.	45	"	46
Southern,	do.	38	"	40
GUANO	do.	2 00	"	3 00
HAY, in bales,	100 lbs.	80	"	90
HEMP, Russia, clean,	do.	195 00	"	200 00
American, water-rotted,	ton,	105 00	"	185 00
American, dew-rotted,	do.	75 00	"	125 00
HIDES, Dry Southern,	do.	8	"	10
HOPS,	lb.	20	"	35
HORNS,	100.	1 00	"	7 00
LEAD,	lb.	4 50	"	4 56
Sheet and bar	do	4½	"	5½
MEAL, Corn,	bbl.	3 50	"	3 75
Corn,	hhds.	16 00	"	17 00
MOLASSES, New Orleans,	gal.	23	"	29
MUSTARD, American,	lb.	16	"	31
NAVAL STORES—Tar,	bbl.	2 25	"	2 38
Pitch,	do.	1 25	"	1 38
Rosin	do.	85	"	95
Turpentine,	do.	4 50	"	5 00
Spirits Turpentine, Southern,	gal.	63	"	75
OIL, Linseed, American,	do.	64	"	65
Castor,	do.	57	"	68
Lard,	do.	70	"	75
OIL CAKE,	100 lbs.	1 75	"	1 88
PEAS, Field,	bush.	1 50	"	2 09
PLASTER OF PARIS,	ton.	2 50	"	2 60
Ground, in bbls., of 300 lbs.	do.	1 12	"	1 23
PROVISIONS—Beef, Mess,	bbl.	7 00	"	9 00
Prime,	do.	4 50	"	5 50
Smoked,	lb.	6	"	9
Rounds, in pickle,	do.	4	"	6
Pork, Mess,	bbl.	10 50	"	13 00
Prime,	do.	9 00	"	10 00
Lard,	lb.	6½	"	7½
Bacon sides, Smoked,	do.	3	"	4
In pickle,	do.	3	"	4
Hams, Smoked,	do.	6	"	10
Pickled,	do.	4	"	7
Shoulders, Smoked,	do.	5	"	6½
Pickled,	do.	4½	"	5
RICE,	100 lbs.	3 75	"	4 50
SALT,	sack,	1 35	"	1 45
Common,	bush.	29	"	35
SEEDS—Clover,	lb.	10	"	13
Timothy,	7 bush.	16 50	"	21 00
Flax, clean,	do.	10 75	"	11 00
rough,	do.	9 50	"	10 00
SODA, Ash, cont'd 80 per cent. soda,	lb.	3	"	3
Sulphate Soda, ground,	do.	1	"	—
SUGAR, New Orleans,	do.	5	"	8
SUMAC, American,	ton,	35 00	"	37 50
TALLOW,	lb.	7	"	8
TOBACCO,	do.	3	"	7
WHISKEY, American,	gal.	22	"	23
WOOLS, Saxon,	lb.	35	"	50
Merino,	do.	30	"	35
Half blood,	do.	25	"	30
Common,	do.	20	"	22

NEW YORK CATTLE MARKET.—Feb 23.

At Market, 1000 Beef Cattle (500 from the South), 80 Cows and Calves, and 1500 Sheep and Lambs.

PRICES.—Beef Cattle.—The market, notwithstanding the recent heavy snow storms, was well stocked last week. Buyers have operated liberally, and not more than 100 head were left unsold at the close of the week's business. Prices remain firm. We quote \$35.50 or \$5.75 for middling and inferior sorts, and \$6.50 or \$7. for superior and prime. A small number of extra brought \$7.50.

Cows and Calves.—All at market were taken at prices ranging, as in quality, from \$17 to \$35—a considerable improvement on the rates of last week.

Sheep and Lambs.—The offerings were large, and a good request prevailed through the week. We quote \$2 or \$4 as the extremes of the market. All sold.

Hay.—The market is well supplied, and though there has been an active demand for the article, prices, since our last report, have not materially improved.

REMARKS.—Ashes steady, but little doing. Cotton a slight reduction in some qualities. Export since 1st September last, 548,783 bales; same time last year, 755,709; same time year before, 392,058. Flour a trifle lower. Corn Meal the same. Grains of all kinds in good demand. Hay dull and unsettled. Molasses in fair request. Naval Stores a decline. Provisions quite dull. Rice without change. Seeds a firmer market. Sugar brisk. Tobacco quiet. Wool in increased demand.

Money has become quite plenty again.

Stocks are on the advance.

Business Generally is opening well.

The Weather.—The ground is covered with a deep snow, yet the weather is clear and mild. The snow we think favorable for a quick spring, as it keeps the ground warm and moist, and, abounding in ammonia, enriches the land. As soon as it thaws, the grass and crops will spring up quick, and have a rapid growth.

PREMIUM LIST OF THE STATE AG. SOCIETY SHOW FOR 1846.—We did not get a proof of this list till the 22d ult., of course too late for this number. We shall give it in our next. We do not know why it did not come to hand sooner, as we believe this was nine days after the Executive Meeting.

To CORRESPONDENTS.—S. Y., A Subscriber, T. L. D. Clift, W. P. Cleaveland, L. G. Bingham, L. T. Talbot, S. B. Parsons, and Andrew Stone, are received.

PRINCE'S LINNÆAN BOTANIC GARDEN AND NURSERIES,
FLUSHING, NEAR NEW YORK.Wm. R. Prince & Co. offer for sale their unrivalled collection of Fruit and Ornamental Trees, &c. The entire fruit department is carefully scrutinized by them personally, and ingrafted from the largest collection of bearing specimen trees in the Union; and they challenge a comparison in accuracy with any establishment in America or Europe. Purchasers are solicited to inspect their trees, and witness their superiority in size and vigor. The pre-eminence claimed can be readily tested by sending duplicate orders to them and to any other nursery. They have 3,000 extra-sized pears (on pear and quince), 8 to 12 feet with heads, very strong, and suitable for immediate bearing; and 10,000 pears, 5 to 8 ft., and 2,000 for dwarfs or *en quenouille*. Also plums, and apricots on plums, of the same sizes, and a large stock of Baldwin and other apples, cherries, and peaches, the latter very low, by the hundred and thousand. 10,000 quinces, 3 to 6 feet; 5,000 Lancashire gooseberries, assorted; Victoria and other currants; Fastolf, Franconia, and other raspberries, at low rates. Of grapes, the assortment comprises the most celebrated and *carefully selected* foreign varieties for the table, and all the American varieties. The collection of roses is the largest in the Union, and comprises 70,000 plants of 1,300 splendid varieties, embracing every novelty that could be selected from ten of the largest collections in Europe, and the plants are much larger than are usually sold. 10,000 magnolias, 3 to 10 feet. 20,000 Evergreen trees, of every class and size. 50,000 Hawthorns and privets, for hedges. 50,000 large Dutch asparagus, and 5,000 Tobolsk, Victoria, and levishian rhubarb. Of ornamental trees they have above 200,000 of every size and class, including 1,000 splendid Paulownia Imperials, 6 to 8 feet. The purchaser may save two years by the superior size of their trees and shrubbery.

Priced Catalogues sent to all post-paid applicants.

February, 1846.

HOVEY'S SEEDLING STRAWBERRY.

Price \$1.50 per hundred plants, and \$10 per thousand.

A. B. ALLEN, 187 Water Street, N. Y.

SHEPHERD DOGS FOR SALE.

Four very fine pups raised from an imported English dog and Scotch slut. Apply by letter, post paid, to Bn. Gates, 200 Broadway, N. Y. Or may be seen at the above place after 6 P. M.

IMPERIAL OATS.

A few barrels of these superior oats can be had of the subscriber. Price \$4 per barrel, or 1.50 per bushel.

A. B. ALLEN, 187 Water Street, N.Y.

SAXTON & MILES,

BOOKSELLERS, PUBLISHERS, AND STATIONERS,
No. 205 Broadway, New York,

Would particularly call attention to their assortment of works pertaining to Agriculture and Rural Economy, a few of which are enumerated, with the retail prices, from which a liberal discount will be made when a number of works are ordered at one time, viz.:—

- Townley on the Honey Bee. 50 cents.
- The American Flower Garden Directory. Price \$1.25.
- The American Shepherd. Price \$1.
- Vols. 1, 2, 3, and 4, American Agriculturist. Price \$1.25.
- Johnson's Agricultural Chemistry. Price \$1.25.
- Ruschenberger's Horsemanship. Price \$1.
- Stock Raiser's Manual. Price \$3.
- American Farmer's Encyclopedia. Price \$4.
- Treatise on Cattle. Price \$3.
- Prince's Pomological Manual. Price \$1.50.
- McMahon's American Gardener. Price \$3.50.
- Hoare on the Vine. Price 63 cents.
- The American Florist. Price 38 cents.
- Parnell's Applied Chemistry. Price \$1.
- Ure's Dictionary of Arts, Manufactures, &c. Price \$6.
- Dana's Prize Essay on Manures. Price 12½ cents.
- Fessenden's American Gardener. Price 80 cents.
- Knowlson's Cattle Doctor or Cow Doctor. Price 25 cents.
- Complete Gardener and Florist. Price 37 cents.
- Buist on the Rose. Price 75 cents.
- Prince on the Rose, *in press*.
- Downing's Fruit and Forest Trees. Price \$1.50.
 - " Landscape Gardening. Price \$3.50.
 - " Cottage Residences. Price \$2.
- Lang's Highland Cottages. Price \$1.50.
- Every Lady her own Flower Gardener. Price 38 cents.
- Mason's Farriery. Price \$1.
- Hind's Ditto. Price 75 cents.
- Every Man his own Gardener. Price 12½ cents.
- The Horse, its Habits and Management. Price 12½ cents.
- Boussingault's Organic Nature. Price 50 cents.
- Draper's Treatise on Plants. Price \$2.50.
- Agricultural Almanac. Price 6 cents.
- The American Poulterer's Companion; a practical Treatise on the Breeding, Rearing, Fattening, and General Management of the Various Species of Domestic Poultry, with Illustrations (fifty or sixty) and Portraits of Fowls taken from Life. By C. N. Bement. Price \$1.25.
- Clater and Youatt's Cattle Doctor, containing the Causes, Symptoms, and Treatment of all the Diseases incident to Oxen, Sheep, and Swine. Price 50 cents.
- Essays on Practical Agriculture, by Adam Beatty, of Kentucky. Price \$1.
- The American Turf Register and Stud Book. By P. N. Edgar. Price \$2.
- Liebig's Agricultural and Animal Chemistry. Price 25 cts. each.
 - " Familiar Letters on Chemistry. Price 12½ cents.
 - Loudon's Encyclopaedia of Agriculture (English). Price \$10.
 - " Encyclopedia of Gardening. Price \$10.
 - " Encyclopedia of Architecture. Price \$14.
- Bridgeman's Young Gardener's Assistant, new edition, much enlarged. Price \$2.
- The Farmer's Mine, being the most complete work on Manures ever published. Price 75 cents.
- The Vegetable Kingdom, or Hand Book of Plants. Price \$1.25.
- Youatt on the Horse; a new edition. Price \$1.75.
- Rural Economy. By Boussingault. Price \$1.50.
- Stable Economy, by Stewart. Revised by A. B. Allen. Price \$1.
- Johnston's Catechism of Agricultural Chemistry and Geology. Price 25 cents.
- The Complete Farmer and Rural Economist, by Thomas G. Fessenden. Price 75 cents.
- The New American Orchardist, by Wm. Kenrick. Price 87½ cts.
- The Honey Bee, its Natural History, &c., with 36 engravings. Price 31 cents.
- Bees, Pigeons, Rabbits, and the Canary Bird, familiarly described. Price 37½ cents.
- The American Poultry Book; being a practical Treatise on the Management of Domestic Poultry. Price 37½ cents.
- A Treatise on Sheep, with the best means for their General Management, Improvement, &c., by A. Blacklock. Price 50 cents.
- The Theory of Horticulture; or, an attempt to explain the principal operations of Gardening upon Physiological Principles, by J. Lindley. Price \$1.25.
- Gardening for Ladies, and Companion to the Flower Garden, by Mrs. London. Price \$1.50.
- American Husbandry. Price \$1.
- The Farmer's Instructor; consisting of Essays, Directions, and Hints for the Management of the Farm and the Garden. By J. Buel. 2 vols. Price \$1.
- A Muck Manual for Farmers, by Samuel L. Dana. Price 50 cts.
- Chemistry Applied to Agriculture, by M. Le Comte Chaptal. Price 50 cents.
- Skinner on the Dog. Price 75 cents.
- Orders promptly attended to, for all kinds of Books in every department of Literature.

SAXTON & MILES are Agents for all the Publications of the day, which will be furnished at publisher's prices.

Also, on hand, a complete assortment of School, Classical, Medical, and Miscellaneous Books, which they offer at wholesale and retail, at the lowest prices for Cash.

LAWRENCE'S TONGUELESS BUCKLE.

The Subscriber offers for sale the above patent buckle in any quantity, in all parts of the United States, except Wisconsin, Illinois, Indiana, Michigan, Ohio, Pennsylvania, and so much of New York as lies west of the Hudson river. The right to make the buckles for all Pennsylvania and New York belongs *soldly* to the subscriber, and he will furnish buckles to all who own rights to sell and use in those two States; and they *must* procure them of the subscriber. Persons in those two States, who wish buckles, must furnish to the subscriber a certificate of the patentee, that they own the right to sell or use. For an account in full of this buckle, which is superior to all others, see the American Agriculturist for Sept., 1845. The buckle being without a tongue, the trace is not weakened by cutting holes in it; it is a compound lever, and holds the trace by pressure, and as the pressure condenses the trace it makes the trace stronger, just where the buckle having a tongue makes it weakest; and the greater the draught the greater the pressure of the buckle on the trace. For buckles apply to Cornell, Brothers, 289 Pearl Street, New York.

THOS. HOLLIS.

LINNÆAN BOTANIC GARDEN AND NURSERY,

(LATE OF WILLIAM PRINCE, *Deceased*)

FLUSHING, LONG ISLAND, NEAR NEW YORK.

The New Proprietors of this ancient and celebrated Nursery, known as PRINCE's, and exclusively designated by the above title for nearly fifty years, offer for sale a more extensive variety of Fruit and Ornamental Trees, Shrubs, Vines, Plants, &c., than can be found in any other nursery in the United States, and the genuineness of which may be depended upon; and they will unremittingly endeavor to merit the confidence and patronage of the public, by integrity and liberality in dealing, and moderation in charges.

Descriptive Catalogues, with directions for Planting and Culture, furnished *gratis*, on application POST-PAID, and orders promptly executed.

WINTER & CO., Proprietors.

Flushing, L. I., Feb., 1846.

COUNTRY RESIDENCE.

The house, garden, and outbuildings of the late Mr. William Cleveland, are offered for sale at a great bargain. The situation is a most desirable one for a person having children to educate, being within a few rods of an excellent high school, in the First Society of the town of Norwich, Conn. The house will accommodate a large family, or two small ones, having two kitchens, two gardens, &c., &c. The water is excellent both for drinking and washing. For particulars inquire of Henry Strong, Esq., or George D. Fuller, of Norwich, Conn., or

A. B. ALLEN, 187 Water Street, New York.

FASTOLFF RASPBERRY.

The Subscriber has just received a fresh supply of the above valuable Raspberry, esteemed in England superior to all other varieties. The fruit is very large, of rich flavor, and bears abundantly. They are ready for delivery as follows:

Package containing 25 canes, \$5. Containing 12 canes, \$3.

Single canes, 30 cents. These are warranted true to name.

Also for sale, a choice collection of green-house and stove plants. Orders addressed to the undersigned will receive attention, and from unknown applicants a remittance or satisfactory reference is required.

JACOB R. VALK.

Horticultural Gardens, Flushing, L. I., N.Y., January 1, 1846.

IMPROVED STOCK FOR SALE.

The subscriber breeds on his farm for sale, the following animals of the choicest kind, viz.:—

Durham Cattle,

Devon do.

Cotswold Sheep,

Southdown do.

His farm is large, and his herd and flocks numerous, which enables him to give an excellent choice. He is paying particular attention to the milking qualities of his cattle, both among Durhams and Devons. His sheep also are not only bred for fine forms and strong constitution, but heavy, thick fleeces of a good quality of wool. His residence is two-and-a-half miles from Buffalo, and is reached in ten minutes by railroad.

Black Rock, Erie County, N.Y.

LEWIS F. ALLEN.

FOR SALE OR EXCHANGE.

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